





C. M. Cherry

THE CLASSROOM TEACHER



MILO B. HILLEGAS, Ph.D.

EDITOR-IN-CHIEF

THOMAS H. BRIGGS, Ph.D.

EDITOR, JUNIOR-HIGH-SCHOOL SECTION

AND SIXTY OTHER

DISTINGUISHED EDUCATORS



WITH AN INTRODUCTION BY

WILLIAM F. RUSSELL, Ph.D.

DEAN OF TEACHERS COLLEGE

COLUMBIA UNIVERSITY



THE CLASSROOM TEACHER, INC.
CHICAGO

COPYRIGHT IN U. S. A. 1927-28
THE CLASSROOM TEACHER, INC.

*Imperial and international
copyrights secured
All rights, including the right
of translation, reserved
for all countries*

PRINTED IN U. S. A.

STAFF OF AUTHORS

THE CLASSROOM TEACHER



EDITOR-IN-CHIEF

MILO B. HILLEGAS, Ph.D., LL.D.

Professor of Education, Teachers College, Columbia University

EDITOR, JUNIOR-HIGH-SCHOOL SECTION

THOMAS HENRY BRIGGS, Ph.D.

Professor of Education, Teachers College, Columbia University

CRITIC AND ADVISORY EDITOR

WILLIAM C. BAGLEY, Ph.D., Ed.D.

Professor of Education, Teachers College, Columbia University



METHOD FROM THE PROJECT POINT OF VIEW

WILLIAM H. KILPATRICK, Ph.D.

Professor of Education

Teachers College, Columbia University

THE LABORATORY PLAN OF INDIVIDUALIZING INSTRUCTION

FRANKLIN W. JOHNSON, L.H.D.

Professor of Education

Teachers College, Columbia University

TESTS AND CLASSIFICATION
PROVISION FOR INDIVIDUAL DIFFERENCES

VIRGIL E. DICKSON, Ph.D.

*Lecturer in Education
University of California*

In cooperation with

LEWIS M. TERMAN, Ph.D.

*Head of the Department of Psychology
Stanford University*

CLASSROOM APPLICATIONS OF PSYCHOLOGY

ARTHUR I. GATES, Ph.D.

*Professor of Education
Teachers College, Columbia University*

MODERN SCHOOL BUILDINGS AND THEIR MANAGEMENT

N. L. ENGELHARDT, Ph.D.

*Professor of Education
Teachers College, Columbia University*

STANDARDIZATION OF RURAL SCHOOLS

GEORGE A. WORKS, Ed.D.

*Dean of the Graduate Library School
The University of Chicago
Formerly Professor of and Head of the
Department of Rural Education
Cornell University*

ROUTINE AND RECORD FACTORS IN
CLASSROOM MANAGEMENT

EDWARD S. EVENDEN, Ph.D.

*Professor of Education
Teachers College, Columbia University*

TEACHING CHILDREN TO STUDY

EDWIN H. REEDER, Ph.D.

*Assistant Professor of Education
Teachers College, Columbia University*

CLASSROOM CONTROL

CORINNE A. SEEDS, A.M.

*Principal of the Training School
Assistant Supervisor of Training
University of California at Los Angeles*

In cooperation with

MILO B. HILLEGAS, Ph.D., LL.D.

*Professor of Education
Teachers College, Columbia University*

THE CURRICULUM

STARTING THE WORK OF THE SCHOOL YEAR

WILLIAM C. BAGLEY, Ph.D., Ed.D.

*Professor of Education
Teachers College, Columbia University*

OPENING EXERCISES

MILO B. HILLEGAS, Ph.D., LL.D.

*Professor of Education
Teachers College, Columbia University*

LESSON ASSIGNMENTS

EDWIN H. REEDER, Ph.D.

*Assistant Professor of Education
Teachers College, Columbia University*

FRANK M. McMURRY, Ph.D.

*Professor of Education
Teachers College, Columbia University*

PRINCIPLES OF GOOD TEACHING

EMMA B. GRANT MEADER, A.M.

*Instructor in Elementary Education
Teachers College, Columbia University*

HEALTH AND PHYSICAL EDUCATION

THOMAS D. WOOD, M.D., A.M.

*Professor of Health Education
Teachers College, Columbia University*

READING

WILLIAM SCOTT GRAY, Ph.D.

*Dean of the College of Education
The University of Chicago*

LAURA ZIRBES, Ph.D.

*Lecturer in Elementary Education
Teachers College, Columbia University*

MORAL AND CIVIC EDUCATION

SPELLING

ERNEST HORN, Ph.D.

*Professor of Education
Director of University Elementary School
University of Iowa*

PHONICS

MAUDE McBROOM, A.M.

*Supervisor and Principal
The Elementary School
University of Iowa*

ANNA D. CORDTS, Ph.D.

*Instructor of Rural Education
Iowa State Teachers College*

TEACHING ENGLISH TO FOREIGN CHILDREN

SARAH T. BARROWS, M.L.

*Assistant Professor of Phonetics
University of Iowa*

CORRECTING DEFECTIVE SPEECH

SARAH T. BARROWS, M.L.

*Assistant Professor of Phonetics
University of Iowa*

LEE EDWARD TRAVIS, Ph.D.

*National Research Council
Fellow in the Biological Sciences*

PRIMARY LANGUAGE AND LITERATURE

ANNIE E. MOORE, A.M.

*Assistant Professor of Education
Teachers College, Columbia University*

JEAN BETZNER, A.M.

*Assistant in Elementary Education
Teachers College, Columbia University*

MARY LEWIS, A.M.

*Assistant in Elementary Education
Teachers College, Columbia University*

INTERMEDIATE-GRADE LANGUAGE

HENRY CARR PEARSON, A.B.

*Professor of Education
Principal, Horace Mann School
Teachers College, Columbia University*

INTERMEDIATE-GRADE LITERATURE

FRANKLIN T. BAKER, Litt.D.

*Professor of English Language and Literature,
Teachers College, Columbia University*

HANDWRITING

FRANK N. FREEMAN, Ph.D.

*Professor of Educational Psychology
The University of Chicago*

ARITHMETIC

DAVID EUGENE SMITH, Ph.D., LL.D.

*Emeritus Professor of Mathematics
Teachers College, Columbia University*

PRIMARY MUSIC

MARY ROOT KERN

*Instructor in the School of Education
The University of Chicago*

MUSIC

PETER W. DYKEMA, M.L.

*Professor of Music Education
Teachers College, Columbia University*

ART

WILLIAM GARRISON WHITFORD, S.M.

*Associate Professor of and Chairman of the
Department of Art Education
The University of Chicago*

JESSIE MABEL TODD, Ph.B.

*Supervisor of Art, the University Elementary
School, Instructor in Art Education
The University of Chicago*

INDUSTRIAL STUDIES

LOIS COFFEY MOSSMAN, Ph.D.

*Assistant Professor of Education
Teachers College, Columbia University*

ELEMENTARY SCIENCE

GERALD S. CRAIG, Ph.D.

*Associate in Natural Sciences
Teachers College, Columbia University*

NATURE STUDY, FIELD AND LABORATORY WORK
REPTILE AND AMPHIBIAN IDENTIFICATION
CAMP COOKERY FOR FIELD TRIPS

E. LAURENCE PALMER, Ph.D.

*Professor of Rural Education
Cornell University*

PLANT AND ANIMAL SOCIETIES
BIRD IDENTIFICATION

ELLIOT R. DOWNING, Ph.D.

*Associate Professor of the Teaching of
Natural Science, The University of Chicago*

FISH IDENTIFICATION

DAVID STARR JORDAN, M.D., Ph.D., LL.D.

*Chancellor, Emeritus
Stanford University*

MAMMAL IDENTIFICATION

LEE R. DICE, Ph.D.

*Curator of Mammals in the Museum of
Zoology, University of Michigan*

INVERTEBRATE IDENTIFICATION

ALFRED E. EMERSON, Ph.D.

*Associate Professor of Zoology
University of Pittsburgh*

PLANT SUCCESSIONS AND IDENTIFICATION

HENRY C. COWLES, Ph.D.

*Professor of and Chairman of the Department
of Botany, The University of Chicago*

COMMUNITY LIFE AND SOCIAL STUDY

GRACE E. STORM, A.M.

*Instructor in Kindergarten-Primary
Education, The University of Chicago*

PRIMARY HISTORY AND CITIZENSHIP

WILLIAM C. BAGLEY, Ph.D., Ed.D.

*Professor of Education
Teachers College, Columbia University*

ROY W. HATCH, A.M.

*Head of the Department of Social Studies
New Jersey State College of Education*

INTERMEDIATE-GRADE HISTORY

WILLIAM C. BAGLEY, Ph.D., Ed.D.

*Professor of Education
Teachers College, Columbia University*

GEOGRAPHY

CHARLES T. MCFARLANE, D.Pd.

*Professor of Geography
Teachers College, Columbia University*

THE JUNIOR HIGH SCHOOL

THOMAS HENRY BRIGGS, Ph.D.

*Professor of Education
Teachers College, Columbia University*

GUIDANCE IN THE JUNIOR HIGH SCHOOL

WILLIAM C. REAVIS, Ph.D.

*Associate Professor of Education
Principal of the University High School
The University of Chicago*

EDUCATION IN SOCIAL RELATIONSHIPS

HARRY C. MCKOWN, Ph.D.

*Assistant Professor of Secondary Education
University of Pittsburgh*

TEACHING THE SOCIAL STUDIES

HAROLD O. RUGG, Ph.D.

*Professor of Education
Teachers College, Columbia University*

HISTORY

EDGAR DAWSON, Ph.D.

*Professor of History and Social Science
Hunter College of the City of New York*

CIVICS

HOWARD C. HILL, Ph.D.

*Assistant Professor of the Teaching of the
Social Studies, The University of Chicago*

BESSIE LOUISE PIERCE, Ph.D.

*Associate Professor of History
University of Iowa*

GEOGRAPHY

ALMON ERNEST PARKINS, Ph.D.

*Professor of Geography
George Peabody College for Teachers*

READING AND LITERATURE
COMPOSITION AND GRAMMAR

STERLING A. LEONARD, A.M.

*Associate Professor in the Teaching of
English, The University of Wisconsin*

MATHEMATICS

WILLIAM D. REEVE, Ph.D.

*Professor of Mathematics
Teachers College, Columbia University*

SCIENCE FOR JUNIOR HIGH SCHOOL

OTIS WILLIAM CALDWELL, Ph.D. LL.D.

*Professor of Education
Director of the Lincoln School
Teachers College, Columbia University*

THE TEACHING OF AGRICULTURE

GEORGE A. WORKS, Ed.D.

*Dean of the Graduate Library School
The University of Chicago
Formerly Professor of and Head of the
Department of Rural Education
Cornell University*

INDUSTRIAL OR MANUAL ARTS

ALANSON HARRISON EDGERTON, Ph.D.

*Professor of and Chairman of the Department
of Industrial Education and Applied Arts
The University of Wisconsin*

THE TEACHING OF HOME-MAKING

JULIA L. HURD, A.M.

*Professor of Home Economics Education
University of Kentucky*

BUSINESS TRAINING

MELVIN S. LEWIS, Ph.D.

*Associate Professor
of Education
Indiana University*

ALFRED SORENSEN, A.M.

*Supervisor of the Teaching of Commercial
Subjects, School of Education
University of California*

LATIN

WILBERT LESTER CARR, A.M.

*Associate Professor of Latin
University of Michigan*

MODERN FOREIGN LANGUAGES

GERMAN

ELIJAH WILLIAM BAGSTER-COLLINS, A.M.

*Associate Professor of German
Teachers College, Columbia University*

FRENCH

ALBERT L. CRU, B.ès L., A.M.

*Assistant Professor of French
Teachers College, Columbia University*

SPANISH

WILLIAM A. CLARKE, A.M.

*Instructor in Spanish
Columbia University, Summer Session*

THE SCHOOL LIBRARY

ANNE T. EATON, A.B., M.L.S.

*Lecturer in Library Economy
Teachers College, Columbia University*

INTRODUCTION

WE REFER to America as the New World; we think of ourselves as a new nation, with its innovations in government and law, its novel problems, and its absence of tradition. Nevertheless we know that it is not wholly new. Almost everything that we have is a modification or adaptation of something brought across the seas. It is said that the only wholly American contributions to the world are the sweet potato, the turkey, tobacco, Indian corn, and the American Indian.

America could not adopt European customs without change. The early settlers who tried to grow wheat in Virginia by English methods starved to death. Only when they made use of the methods followed by the Indians, and later modified them, were the bins full for the winter.

This has been true of schools and teachers. First we started with the European idea. New Oxfords and Cambridges, New Etons and Harrows were established. Primary schools were modeled upon York, Amsterdam, and Rochelle; but it took long years of development and considerable change to make them fit for New York or New Amsterdam or New Rochelle.

In a sense Europe has had a simpler educational problem. The conditions have been more static. Social life has changed less. There has been general agreement as to what kind of nation is wanted and what kind of citizens will best people it. School-teaching has been a stable profession. Once a teacher, always a teacher; and young men and women, under pressure of economic conditions, have looked forward eagerly to securing a post as teacher, which, once secured, they have been unwilling to relinquish.

This led to two conditions that are of great importance to teacher-training in Europe: (1) It was possible to demand thorough training of a teacher in advance of his entrance to

the profession. (2) Social conditions were so constant that one could foretell the school conditions to be faced by the prospective teacher. Thus it was possible, with a clear objective and plenty of time, to train the teacher to do his job bit by bit, just as the Pullman Company trains a porter. That which the skillful teacher needed to do—that was the neophyte taught.

This is one explanation of the excellence of the European elementary school. The teachers know their subjects. Execution and dispatch mark the lesson period. There is little dependence upon the textbook. No teacher makes a hasty and belated effort to keep one jump ahead of the class. A definite job is to be done; and the teacher proceeds with certainty because long ago in the normal school he learned how to do it.

This system of teacher-training was imported into the United States through the normal school. But it failed to do what it had done so well in Europe. Prospective teachers would not go to school long enough. Too many attractive positions enticed them elsewhere. Teaching was too often considered a stepping stone to something else. Why bother to pay the price for adequate training when you might not have to teach for any great length of time? If American authorities were to demand European standards (normal-school graduation for the elementary school; Ph.D. plus for the high school) the teaching positions could not be filled.

Not only was America unable to secure prospective teachers for a period long enough to train them well, but there was a lack of definiteness of purpose. Our whole social structure is in constant change. Everything, we say, is "dynamic." Not only do schools vary from district to district and from state to state, but individual schools change from year to year. We cannot give specific preparation for the minute parts of the teacher's work as is done in Europe.

There long training is given for a known objective. We are compelled in a brief period to give training so fundamental that the teacher may not only adjust himself to varying schools, but that he may grow with educational evolution.

This we cannot do in a normal school or in a teachers' college in a brief time. We must resort to other expedients. So we purchase better textbooks. We provide "teachers' aids." We purchase maps, charts, and other visual material. We employ supervisors. We attend teachers' institutes. Summer schools are popular. All these are devised to provide training that our teachers should have had at the start.

But it is all too haphazard, too accidental. Some teachers are bound by the textbook, not helped; the teacher's aid may give an outworn method; the supervisor may be a fanatic on some subject; the institute, only inspirational. What the American classroom teacher needs is a complete exposition of the American school, its management, its life, its curriculum and the best that we know of how to teach it. We need a balanced treatment, scientifically accurate and in good taste.

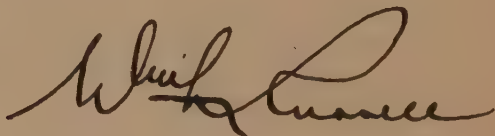
This is the function of THE CLASSROOM TEACHER. Here we find a collection of books dealing with the elementary school and the junior high school. The editors are the outstanding leaders of the profession, and the various sections are written by those best qualified to speak. No one school of thought is emphasized. No individual hobby is stressed. The leading teacher-training institutions are represented. The teacher who uses these books may rest assured that the statements are authoritative in the light of the best theory and practice to date.

In selecting authors, the editor-in-chief has been careful to select only those who would prepare an original manuscript which would be a distinct contribution. It has been an aim to have each subject treated in such a practical manner that any teacher will find immediate help both in professionalized subject-matter and in method. The emphasis is on content material. Only such material has been selected as will apply to the pupils in the first nine grades. The author's signature at the end of each department is an assurance that he himself wrote that section expressly for THE CLASSROOM TEACHER.

THE CLASSROOM TEACHER consists of twelve volumes, which have been divided into three units. The first volume

deals with professional subjects applicable to all grades and is intended for use with any one of the three units. Volumes Two, Three, Four, and Five are concerned with the work of the first three grades. Volumes Six to Nine, inclusive, deal with the work for Grades IV, V, and VI. Volumes Ten to Twelve, inclusive, cover the work for Grades VII, VIII, and IX, or the junior high school.

To the beginning teacher the series is a mine of information, a source of study for years to come. To the master, it presents the opportunity to compare his experience and successful practice with the newest and best. In particular, this series holds within its twelve volumes the challenge that, after all, even if education appears so diverse, it nevertheless centers about the child; that it has unity, and that all its varied factors in the hands of the ideal teacher will become one, to the end that our children may become men and women of whom we may be proud.

A handwritten signature in dark ink, appearing to read "William L. Sturges". The signature is fluid and cursive, with a large initial "W" and a long, sweeping underline.

Teachers College
Columbia University
March 21, 1927

EDITOR'S INTRODUCTION

THE motives that led to the development of THE CLASSROOM TEACHER had their sources in the daily problems that confront the modern classroom teacher. In recent years the number of subjects that are taught has been greatly increased. The daily programs are crowded and there are demands upon teachers that were not known earlier.

There are many valuable books and pamphlets having to do with the subject-matter and the teaching of each of the different school subjects. Each subject accordingly makes its own demands upon the teacher, and often these demands are in conflict with one another. There has been a serious lack of books that help the teacher to bring about a unity in the classroom such as our modern conception of good teaching demands.

Teachers' colleges and normal schools present the various subjects of study from the viewpoint of the specialists, and often these specialists are not in sufficient agreement to bring about a unity between the different departments. Those who are instructed in these institutions eventually become teachers. Then, for the first time, they are compelled to view the entire work of the classroom as a unit rather than to emphasize particular studies.

Everyone who deals with teachers recognizes the desirability of more complete professional assistance than has been available. This assistance is required in subject-matter as well as in methods, and the nearer these two phases of the work can be brought together in accordance with actual classroom procedure, the greater will be the effect on the efficiency of the teacher.

Informal conferences among educators strengthened the conclusion that a complete professional help containing both subject-matter and reliable methods was possible. Advised and urged by many of my professional colleagues, I accepted

the responsibility of the office of Editor-in-Chief of *THE CLASSROOM TEACHER*, and I assumed full responsibility for its organization and for the selection and inviting of authors.

It was decided that the most helpful form in which to arrange the work would be that which would fit the ordinary eight-year elementary school and also the six-year elementary school followed by three years of junior high school. I invited Dr. Thomas Briggs to assume the responsibility of organizing the work of the seventh, eighth, and ninth years. His acceptance is an assurance that the volumes which contain the work for these grades represent the best in modern educational theory and practice.

At the conclusion of this enterprise, which has extended over a period of more than four years, I find myself under deep obligation to many persons. The authors have invariably been exceedingly busy people yet they have ungrudgingly given their time and energy, not alone to conferences concerning their own departments, but also to considerations of the work as a whole. Their devotion to a professional enterprise is largely responsible for the merits of this series.

I am under peculiar obligations to Dr. William C. Bagley. His generous advice was most helpful in the organization of the work. He was the first to be invited as an author, and his acceptance of the responsibility for the sections which bear his signature was an encouraging beginning.

THE CLASSROOM TEACHER represents an earnest effort on the part of the authors to serve the great group of teachers to whom they feel themselves united by professional bonds. If the use of these volumes makes teaching itself more attractive and the work in the classroom more effective, the ambitions of all who have participated in the work will be achieved.

Milo B. Hillegas.

Teachers College
Columbia University
January 2, 1927

PUBLISHER'S ACKNOWLEDGMENT

SOMEONE has said that when a problem arises in the path of advancing civilization, a man who will solve that problem also arises; that when civilization needs a tool, the creator of that tool comes forth; that for every pass of Thermopylae, there is always a Leonidas with his three hundred. And so it was that when the leaders of the teaching profession became conscious of the need of a complete professional help for the use of the classroom teacher, they united to bring forth this help. Sixty of these distinguished educators have given their time that the classroom teacher may have the benefit of the wide experience gained and the professionalized subject-matter assembled during their years of successful effort in the field of elementary education. But these sixty educators are only a part of the group that have been interested in this project. They have had the advice of a countless number of their colleagues, who have cooperated to make *THE CLASSROOM TEACHER* a distinct contribution to the field of educational literature.

The publisher feels an inadequacy of words when he tries to express his appreciation to the authors and their colleagues for the valuable time and energy which they have spent in preparing the vast amount of professionalized subject-matter in this series. In addition to these authors the publisher finds himself greatly indebted to many others who have worked as though inspired to make *THE CLASSROOM TEACHER* an outstanding publication.

To Miss Margaret Hobert, the directing staff editor, and to her group of competent associates, he feels especially indebted. Miss Hobert has shown a skill and an interest which have won for her the high respect of the entire staff of authors. No higher compliment could be paid.

To Miss Theodosia Hadley, who contributed her special studies in science, and to Miss Clara Dietz, who assisted in

preparing the bird-identification department, he wishes to express his profound appreciation.

Major Allan Brooks has long been recognized as one of the foremost bird artists. We should have been more than satisfied if his work for *THE CLASSROOM TEACHER* had measured up to his usual high standard. But Major Brooks seems to have caught that professional spirit which has characterized the work of everyone identified with this project, and he has, we believe, done a piece of work in the twenty-two splendid color plates for these volumes which surpasses anything that he or any other bird artist has previously prepared.

Those best qualified to judge regard Miss Mary Eaton of the New York Botanical Gardens as the greatest living painter of wild flowers. In the groups which she has prepared for *THE CLASSROOM TEACHER* she has not only painted the likeness of the flower with the greatest botanical skill, but she has put the very soul of the plants into her work.

To Thomas C. Cleeland, who is generally conceded to be one of America's foremost authorities on typography and book design, we wish to express our thanks. He has made a type page which is dignified, beautiful, and scientifically correct. To Ernst F. Detterer, head of Department of Printing Arts, The Art Institute of Chicago, who assisted on the details of the typographic design, we are deeply grateful.

Mrs. May Hagadorn, head proof reader, has dispatched with credit the countless mechanical details in connection with the printing of the volumes.

Miss Julia E. Elliott, professional librarian and indexer, has prepared a thorough analytical index, including subject-titles and authors, with full cross references.

Chester H. Lawrence, art director, has brought together a staff of splendid artists whose illustrations add much to the value of the work. The pictures are an integral and vitally important part of the text.

It has been a great privilege to work with Dr. Milo B. Hillegas. For four years he labored unceasingly to build this work, and during this time he traveled many thousands of miles for conferences with authors. Each problem which

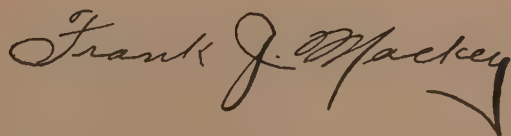
arose he settled on a strictly professional basis with absolute satisfaction to all concerned. His one thought was to lighten and make more efficient the work of the classroom teacher. To this end he has worked conscientiously and with unlimited patience.

Privileged, indeed, is the man who can call Dr. Thomas H. Briggs his friend. In the earliest days of the development of this project Dr. Briggs visualized the influence that such a publication would have on education. During the years of labor he never for a moment lost that vision. He knew what he wanted for the junior-high-school section and he got it.

It is extremely difficult for the publisher to express his appreciation of his association with Dr. William C. Bagley. Dr. Bagley might well be termed the godfather of *THE CLASSROOM TEACHER*. He has been most kind in his attitude and most generous with his valuable time. Never has he been too busy to go into conferences, to offer constructive criticism on manuscript, to weigh knotty problems, or to offer his seasoned and well-balanced counsel.

It is with the utmost confidence that we present *THE CLASSROOM TEACHER* to those who are dedicating their lives to the cause of education. To quote from a speech delivered by Dr. Hillegas, at a meeting of the National Education Association, where *THE CLASSROOM TEACHER* was formally introduced to the educators:

"If the authors who are *THE CLASSROOM TEACHER* staff cannot make a set of books that is entitled to the respect and confidence of the teachers, then we must simply assume that such a thing cannot be done. If, on the other hand, these authors have accomplished their purpose, no work of this sort can be brought out again until a new generation of school men and women has been developed."

A handwritten signature in cursive script, reading "Frank J. Mackey". The signature is written in dark ink and is positioned in the lower right quadrant of the page.

CONTENTS BY VOLUME

PRIMARY SECTION

VOLUME ONE

THE CURRICULUM—STARTING THE SCHOOL YEAR—CLASSIFICATION—CLASSROOM CONTROL—ROUTINE AND RECORD FACTORS—THE PROJECT METHOD—PRINCIPLES OF GOOD TEACHING—PSYCHOLOGY—ASSIGNMENTS—HEALTH AND PHYSICAL EDUCATION—SCHOOL BUILDINGS AND THEIR MANAGEMENT—STANDARDIZATION OF RURAL SCHOOLS—OPENING EXERCISES—MORAL AND CIVIC EDUCATION.

VOLUME TWO

TESTS AND CLASSIFICATION—READING—PHONICS—TEACHING ENGLISH TO FOREIGN CHILDREN—CORRECTING DEFECTIVE SPEECH—SPELLING.

VOLUME THREE

LANGUAGE—LITERATURE—INDUSTRIAL STUDIES.

VOLUME FOUR

ART—MUSIC—ARITHMETIC—COMMUNITY LIFE AND SOCIAL STUDY.

VOLUME FIVE

HEALTH TEACHING—PHYSICAL EDUCATION—HANDWRITING—SCIENCE—FIELD AND LABORATORY WORK IN NATURE STUDY—HISTORY AND CITIZENSHIP—GEOGRAPHY.

INTERMEDIATE-GRADE SECTION

VOLUME SIX

CLASSIFICATION OF PUPILS—TEACHING CHILDREN TO STUDY—READING—LITERATURE—LANGUAGE.

CONTENTS BY VOLUME

VOLUME SEVEN

ART — INDUSTRIAL STUDIES — ARITHMETIC — MUSIC — SPELLING.

VOLUME EIGHT

HEALTH-TEACHING—PHYSICAL EDUCATION—HANDWRITING—SCIENCE—GEOGRAPHY—HISTORY.

SPECIAL SCIENCE VOLUME

VOLUME NINE

PLANT AND ANIMAL SOCIETIES—IDENTIFICATION—APPRECIATION SCIENCE SECTION.

BIRDS—HOW TO ATTRACT BIRDS—MAMMALS—FISHES—INVERTEBRATES—REPTILES AND AMPHIBIANS—PLANT SUCCESSION AND IDENTIFICATION.

CAMP COOKERY FOR FIELD TRIPS.

JUNIOR-HIGH-SCHOOL SECTION

VOLUME TEN

THE JUNIOR HIGH SCHOOL—THE LABORATORY PLAN—INDIVIDUAL DIFFERENCES—GUIDANCE—SOCIAL RELATIONSHIPS—READING AND LITERATURE—COMPOSITION AND GRAMMAR—SPELLING—MATHEMATICS—BUSINESS TRAINING—SCIENCE.

VOLUME ELEVEN

ART—THE SOCIAL STUDIES—HISTORY—GEOGRAPHY—CIVICS—MUSIC.

VOLUME TWELVE

INDUSTRIAL OR MANUAL ARTS—AGRICULTURE—HOME-MAKING—HEALTH TEACHING—PHYSICAL EDUCATION—MODERN FOREIGN LANGUAGES—GERMAN—FRENCH—SPANISH—LATIN.

THE CLASSROOM TEACHER

VOLUME I



THE CLASSROOM TEACHER, INC.
CHICAGO

CONTENTS

VOLUME ONE

	PAGE
THE CURRICULUM OF THE ELEMENTARY SCHOOL . . .	3
STARTING THE WORK OF THE SCHOOL YEAR	37
THE CLASSIFICATION OF PUPILS	85
CLASSROOM CONTROL	113
ROUTINE AND RECORD FACTORS IN CLASSROOM MANAGEMENT	173
SCHOOL METHOD FROM THE PROJECT POINT OF VIEW	203
PRINCIPLES AND CHARACTERISTICS OF GOOD TEACHING	
CHAPTER	
I. THE APPLICATION OF THE DOCTRINE OF INTEREST .	243
II. CHARACTERISTICS OF GOOD TEACHING BASED ON THE PRINCIPLE OF INTEREST	262
CLASSROOM APPLICATIONS OF PSYCHOLOGY	299
LESSON ASSIGNMENTS	323
HEALTH AND PHYSICAL EDUCATION	
CHAPTER	
I. HEALTH AND THE TEACHER'S OPPORTUNITY . . .	335

C O N T E N T S

CHAPTER	PAGE
II. HEALTH EXAMINATIONS AND POSITIVE HEALTH CARE OF PUPILS	341
III. PREVENTING AND CONTROLLING DISEASE	380
IV. FIRST AID AND EMERGENCIES	392
V. THE TEACHER'S PART IN SOCIAL HYGIENE	397
VI. MENTAL HEALTH	401
VII. TEACHING CHILDREN HEALTH	414
VIII. THE PHYSICAL EDUCATION PROGRAM	420
IX. THE TEACHER'S OWN HEALTH	438

MODERN SCHOOL BUILDINGS AND THEIR MANAGEMENT

CHAPTER	PAGE
I. BUILDINGS AND GROUNDS	447
II. EQUIPMENT AND MANAGEMENT	482
STANDARDIZATION OF RURAL SCHOOLS	519
OPENING EXERCISES	547
MORAL AND CIVIC EDUCATION	555

THE CURRICULUM OF THE ELEMENTARY SCHOOL



By

WILLIAM C. BAGLEY, Ph.D., Ed.D.

Professor of Education
Teachers College, Columbia University

THE CURRICULUM OF THE ELEMENTARY SCHOOL

I INTRODUCTION

THE elementary school is one of the most powerful forces in the modern world. It owes its power to the fact that it touches and quickens "all the children of all the people." It thus differs from the high schools and colleges which influence directly only a fraction of each generation. From this fraction, it is true, most of the "leaders" of the future will be selected. This fact, however, does not make the education of the great masses of the people any less significant. Modern civilization is a democratic civilization. Democracy means that the ultimate control of affairs is in the hands of the people as a whole. It is the elementary school that determines in largest part the education of the people as a whole. It is by no means an accident that the most stable, prosperous, and promising of the nations today are those that, in the past, have given the most attention to their elementary schools. Nor is it accidental that the nations of today which face the future with the most serious doubt and gravest uncertainty are those in which the elementary education of all the people has been neglected.

A school exerts its influence in three principal ways: through the character and personality of the teacher; through

the life of the school itself (the acquaintance of the pupils with one another, their games, their competitions, and their common strivings); and through its "curriculum" of organized studies and activities. Each of these is important and none is independent of the others. It is the curriculum, however, that most clearly represents the function or purpose of the school.

WHAT IS MEANT BY A CURRICULUM?

In the Latin language *curriculum* meant a race-course, or a course to be run. As used today in educational discussions, the word retains in a figurative fashion something of the old Latin meaning. A curriculum in a school or college is a definite series of studies or activities to be pursued. The separate units making up a curriculum are usually spoken of as "courses of study." Thus a college-preparatory curriculum in a high school may comprise courses in English, in history, in mathematics, in the natural sciences, and in foreign languages. A commercial curriculum, on the other hand, will be made up chiefly of courses in bookkeeping, commercial arithmetic, stenography, typewriting, and similar subjects, although it may include some of the courses that one finds in the college-preparatory curriculum. The point is that a curriculum is a series of courses organized with reference to a definite end or purpose.

High schools and colleges usually offer more than one curriculum, or they may provide a wide range of courses from which the individual student, under the guidance of his advisers, will construct an individual curriculum to meet his own needs. This is another way of saying that high schools and colleges, as a rule, do not assume that all of their students have the same ends in view. These institutions serve varied purposes and for this reason they provide varied curriculums to meet these purposes.

The elementary school, however, does not serve varied purposes. It rather aims to lay a common foundation upon the

basis of which specialized or varied purposes may later work toward their realization. The elementary school, indeed, may be thought of as having a single purpose. The development of the elementary school has gone hand in hand with the development of democracy. Just as the rise of democracy has depended upon the ever-increasing enlightenment of all the people, so the outstanding task of the elementary school is to bring light to "all the children of all the people." Itself a product of democracy, it can "play no favorites." In so far as is humanly possible—that is within the limits set by varying capacities to learn—its light must be a common light for all.

The curriculum of the elementary school is the immediate source of this common light. The ultimate source is the long and toilsome experience of the human race. Ideally, the elementary curriculum should comprise the most important and precious elements of human knowledge and human skill—that is, the most fundamental and far-reaching lessons that the race has learned. Practically, the curriculum falls far short of meeting this ideal. Some of its shortcomings are due to the fact that the elementary school deals with immature minds that are unable to grasp many of these fundamental and far-reaching truths. Others of its deficiencies are the result of tradition. Certain items of knowledge and skill have found a place in the curriculum, not because they are so important and fundamental that everyone should master them, but for various other reasons, some of which we shall refer to presently. Once made a requirement in the schools, these things tend to persist through the force of tradition.

Notwithstanding these defects and shortcomings, however, there can be no doubt that many if not most of the materials now comprising the elementary curriculum are fundamentally valuable, and that their elimination from the common culture of all the people would be most disastrous. What these materials are and at what stages of the curriculum they may best be taught will be the principal theme of the present discussion of the subjects.

THE EXTENT OF COMMON EDUCATION

There is, however, an important question to which brief attention should be given before we pass to our main theme. We have referred to the elementary curriculum as comprising in the main those studies and activities that should be common to all; but how far is it possible or profitable to carry this common or undifferentiated education? When should the varying needs of different groups or different individuals be considered? When should choice of studies be permitted? When should "differentiated curriculums" be introduced?

Until recently, the common, undifferentiated curriculum of the elementary school in most of the American states and in the provinces of Canada has covered eight years of school life. The southern states have generally limited it to seven years. New England, on the other hand, favored for a long time a nine-year elementary school. Throughout the United States and Canada the work of the high school has followed that of the elementary school, and the work of the college has been built on the work of the high school. This general organization of the educational system as developed in North America seems most natural and logical. Americans are so familiar with it that it is difficult for them to conceive of the quite different organization that characterizes the educational systems of other civilized countries.

There is, however, a most important difference, and in brief it is this: In almost all of the European countries up to the time of the World War there were two distinct types of schools: (1) the elementary schools, which were the schools for the "masses"; and (2) the secondary and higher schools, which were schools for the "classes." The former were not connected or articulated with the latter. A pupil did not complete the work of the elementary school and then go on to the secondary school and the college or university. When he finished the elementary school he was through—except as he continued his training in a trade school or (in a few

countries) in a "continuation" school. On the other hand, a pupil who was to have an extensive education did not as a rule enter the elementary school at all. He usually attended a private primary school and then at an early age—nine or ten or eleven—he entered a secondary school where he remained until he was eighteen or nineteen, when he went on to the university or entered a special type of higher school or went into business.

Generally speaking, then, the European countries did not provide a common education for "all the children of all the people." A rigid distinction was made between those who were destined for the humbler tasks of life and those who would be the "leaders." The former were given a thorough but rather narrow training in the three R's, with some instruction in geography, history, civics, and with an especially heavy emphasis, too, upon moral instruction in France or religious instruction in most of the other European countries. The latter—the prospective "leaders"—were given a thorough but much more extended education including from an early age instruction in either the ancient or the modern languages, or in both, mathematics, science, history, and literature, together with moral or religious instruction.

The disadvantage of the older European system as compared with the North American system lay in the fact that it effectually closed the door of educational progress to all children except those whose parents could afford to send them at an early age to the "class" schools. The advantage lay in the much more extended and thoroughgoing preparation that could be given to those who could attend these schools.

The advantage of the American plan lay in the fact that it kept open the door of opportunity. The disadvantage lay in the fact that the education of those who did go on was less thorough and probably less efficient for its purpose than it would have been had they begun their secondary education at an earlier age. It is probable, too, that the attempt to give

all children the same education, unless carefully safeguarded, tends to reduce the standards to those that the pupil of average ability can meet with a fair degree of effort, thus holding the brighter pupils to a pace that is below their real capacity.

During recent years, and especially since the World War, many of the European nations have modified their rigid "caste" systems of education. In England, for example, it is now possible for a child of poor parents who shows promise of good ability to pass from the elementary school to a secondary school at the age of eleven or twelve. In Germany the tendency is to provide a common education for all during the first four years of school life, and then, for those who can go on with their education, to provide types of schools and curriculums that differ sharply from the schools and curriculums to which the great masses of children will be limited. These countries, in other words, are now attempting to provide much more in the way of "equal educational opportunities for all" than they did before the war. They have not gone so far, however, as to adopt the American plan of an "educational ladder."

In the United States the tendency is to recognize the first six school years (Grades I to VI inclusive) as the period of common education, and then to begin to differentiate to a slight degree in the junior high school (that is, Grades VII to IX inclusive). It does not seem probable, however, that a marked differentiation of studies for different pupil-groups will characterize American schools earlier than the senior high-school period. The prevailing practice, indeed, is to require the basic or "trunk-line" subjects of elementary education for all pupils through the seventh and eighth grades and even into the ninth grade.

This does not mean, however, that American education is blind to the fact that children vary widely in their capacities for learning. Nor does it mean that American teachers believe that all children should be held to the same pace. A great deal of thought is being given to solving this problem

of individual differences (see the discussion of this topic, p. 85). There is, however, a general conviction that the "educational ladder" should be preserved. There is a general agreement, too, that it is wise in a democracy to have all of the children attend the same kind of an elementary school and pursue a curriculum which will be practically common to all for a period of six years, and important parts of which will be common to all for at least two additional years. The present discussion, then, will refer chiefly to this common "core" of materials as constituting the principal studies and activities of the school through the first eight years.

II

THE BASIC OR "TRUNK-LINE" SUBJECTS

Three important questions arise in connection with this common core of subjects and activities:

1. How shall we determine what subjects and activities are so important as to be included in this list?
2. Once these basic materials have been agreed upon, at what stages in the child's development can each unit be most effectively taught?
3. How shall the time available for basic education be divided among these subjects and activities?

THE THREE R'S

Fortunately there is little disagreement with regard to certain basic subjects. Elementary education has developed in response to certain fundamental and obvious social needs. When people live together and work together in large groups, the *arts of communication* and especially the *language arts* become of very great importance. The development of oral language was one of the first steps in human progress. It not only made group life possible, it also enabled each generation to profit by the experience of its predecessor, and so paved the way for succeeding generations.

Oral language, however, has important limitations. Spoken words are fleeting things except as they are stored in memory—and memory is not always trustworthy. The invention of writing, then, was an event of tremendous significance; some students, indeed, have ranked it as the greatest single event in human history—and not without justice, for writing made possible the accurate preservation of the lessons that each generation learned and their gradual accumulation and refinement in what we now call knowledge.

It was the development of writing, too, that made schools and teachers an essential part of the machinery of civilization. Oral speech is acquired very early in life, and largely by a process of imitation. To read and to write are arts not so easily mastered. So great were the difficulties involved in learning them, indeed, that for thousands of years there was no thought of teaching everyone to read and write. A relatively small number of “literate” persons in each generation had to suffice. If these failed, the records became unintelligible and civilization based upon them quickly disappeared. This has happened more than once in the world’s history. Writing was, indeed, a great advance over spoken language, but it, too, had its limitations.

The invention of movable type and the development of the printing press was the next great step forward—a step so profoundly significant that it is recognized as marking the beginning of modern history in the western world. Records could now be reproduced in such quantities and on the whole so cheaply that the multitudes could well profit from a mastery of the art of reading. The first great movement toward universal literacy came shortly after the development of the printing press. This was the Reformation. The leaders of the Reformation held that every person should interpret the Scriptures for himself, and this meant that every person should learn how to read. The ideal was not realized to the full, however, for a long time, although some progress was made in the countries of northern Europe and in the New England colonies across the Atlantic. The first elementary

schools in America were established from a strictly religious motive—to teach children to read the Bible.

In the eighteenth century and the first half of the nineteenth century, the final impetus was given to universal elementary education by two great movements, the Industrial Revolution and the rise of democracy. The steam engine and the application of steam power to manufacturing and transportation changed social life in countless ways, but in none more profoundly than in the increased need of universal literacy and of a universal mastery of at least the rudiments of arithmetic. An industrial society is a very complex organization. It demands a thoroughness of cooperation quite unknown in the simpler forms of social life. It demands, too, a high degree of specialization in work, and consequent upon this an elaborate system of exchange whereby each worker may dispose of his own products and acquire the products of others to meet his varied needs. Not to be able to read, write, and “cipher” is to be very seriously handicapped.

The rapid rise of democratic institutions paralleled the Industrial Revolution. Every extension of the franchise pointed compellingly to the need not only of universal literacy, but of an education that would carry all of the people far beyond the mere mastery of reading, writing, and arithmetic. But these arts necessarily came first.

Both from the point of view of their historical development and because of their close relationship to the needs of social life under present-day conditions, therefore, the language arts and the arts of computation have a clear title to recognition as the prime or basic fundamentals of elementary education. Whatever else the elementary school may attempt, there can be no dispute about its first duty, which is to teach the “three R’s” passing well.

MORAL INSTRUCTION

What curriculum materials should be ranked next in importance after the three R’s? If one were again to take the historical development of the elementary curriculum as sug-

gestive of the relative significance of the different subjects, one would probably give first recognition to direct moral instruction either on a religious basis or on a non-religious or secular basis. In the European countries, as we have seen, either moral or religious instruction is given large emphasis. The same is true in the provinces of Canada. In the public schools of the United States, however, religious instruction has been discouraged, and direct moral instruction on a secular or non-religious basis has not been developed to any great extent. The prevailing opinion among American teachers and school administrators is that "morals" are best taught indirectly through the various school activities, or incidentally in connection with such subjects as literature, history, civics, and hygiene. While religious or moral instruction is not recognized as a basic subject of the elementary curriculum, then, it is clear that morality or good character is a basic *objective* in teaching other subjects and in organizing the life of the school. (See p. 555.)

GEOGRAPHY, LITERATURE, HISTORY

In the actual development of American education since the end of the eighteenth century, the subjects that have received the greatest emphasis after the three R's are geography, literature, and national history, and these subjects made their appearance in the elementary-school programs in the order just named—geography soon after the beginning of the nineteenth century; literature a little later (represented by the development of school "readers"); and history (as a separate study) toward the middle of the century.

There are good reasons for believing that this historical development came in response to real and vital needs which still persist, and that these three subjects of study can justly claim a position of major significance even today. So long as the great masses of children could remain in school for only two or three years at most (and with the short school terms that prevailed in the early days, five or six years of

school attendance meant little more than two or three years today), the curriculum was necessarily limited to the barest essentials. With the lengthening of the school term and the extension of the school life of the average child, more could be undertaken. Once reading, writing, and arithmetic had been mastered, the way was open to guide the child in the acquisition of a broader knowledge.

Remembering the intimate connection between the development of universal education and the rise of democracy, one can readily understand the tendency to emphasize the studies that would lift the masses of the people somewhat above the narrow confines of their workaday life and give them a broader outlook. Geography carried them beyond their own local neighborhood, and made them acquainted with their country as a whole and with other countries. Literature—even the fragments that constituted the materials of the school readers—introduced them to the great minds that had molded and were molding the ideals of the new democracy. Hundreds of men and women of the generation that has just passed paid eloquent tribute to the stimulus and inspiration gained from the virile “selections” that McGuffey and other textbook editors assembled in the school readers which were used extensively in the years just preceding the Civil War.

History, in its turn, broadened the time-horizon, just as the study of geography broadened the space-horizon, and it served furthermore to give to the masses of the people a keen appreciation of what their political rights and institutions had cost. Even before history was recognized as a separate study in the elementary program, many of its lessons had been embodied in the geographies and in the school readers.

It is not without significance, then, that the first steps that the elementary school took beyond the three R's were pointed in the direction of what we call the “liberal” studies—that is, the studies that “liberate” the mind and broaden the outlook. There is abundant justification for counting these three liberal subjects among the “fundamentals” of universal elementary education.

HEALTH EDUCATION

Among the materials that have been made part of the elementary-school curriculum within the past half-century, there are a few that undoubtedly deserve recognition as fundamentals. Among these are the studies and activities that are now usually referred to under the head, "Health Education." In the United States this movement began with the introduction of "physiology and hygiene" soon after the Civil War. Chiefly through the efforts of the nation-wide organizations that were working against the evils of intemperance, laws were passed in most of the states making mandatory in all schools the study of physiology and hygiene with especial reference to the effects of stimulants and narcotics. (It is probable that this instruction had something to do with the adoption of the Prohibition amendment.)

Parallel with this emphasis of physiology and hygiene, there was a growing interest in physical training, and somewhat later a recognition of the important relation of play to physical development and health. In the past two decades there has been a marked improvement in sanitation and public health, following upon a number of important scientific discoveries in the field of hygiene. This has led to such educational developments as the school clinic, the school nurse, and the school dentist; while something of the new knowledge that is now available regarding health and sanitation is being woven into the school courses in hygiene and in civics.

NATIONAL AND COMMUNITY CIVICS

Other phases of what is called "education for citizenship" have likewise been expanded and enriched during the past few decades. While the study of history acquaints the pupils with the origin of governmental institutions, there is much needed information about the machinery of government that a course in history would not be likely to cover. This need

led to the organization of supplementary courses in "civil government" which gave information about the various official agencies through which the work of the nation and the state is accomplished. Such courses, while obviously needed, were often so abstract and formal as to miss much of their value. They also either neglected or touched very lightly the problems of local government, which became increasingly important with the rapid growth of cities during the latter part of the nineteenth century and the first part of the twentieth.

These defects led to a new type of course called "community civics," which laid less emphasis upon the machinery of state and national government and concerned itself much more with the way in which towns and cities manage their affairs, and especially with the concrete problems of community life in which every citizen has a vital interest—such problems as housing, water-supply, sewage-disposal, charities, public health, street-cleaning, and the like. Parallel with this movement, and readily associated or "correlated" with it, there was a growing tendency to use the school community as a laboratory for the study of civic problems, and especially to develop systems of pupil self-government which would reflect some of the problems of self-government in adult communities.

NON-BASIC SUBJECTS

Many efforts have been made to have the natural sciences adequately represented in the elementary curriculum. Scientific principles appear, of course, in the study of geography and (as we have just suggested) in hygiene. "Nature study" has had many advocates, and has been required by law in some states through the efforts of the humane societies. Elementary agriculture is a legal requirement in the rural schools in a few states. Generally speaking, however, the efforts to teach the natural sciences in the elementary school have not been thoroughly successful—in part because teachers have

not been trained for the work and in part because of the lack of well-organized materials.

Music, drawing, art, manual training, and home economics have all been recognized as elementary-school subjects. Quite clearly, however, their place in the earlier stages of education, while important, is supplementary or accessory rather than central or fundamental. And the same statement will apply even more strongly to such studies as nature study and agriculture. Even though they are not recognized as fundamentals, the materials included under these various heads will do much to enrich and vitalize the work of the elementary school. The problem is primarily one of a proper adjustment and organization of the curriculum as a whole—an adjustment and organization that will insure enough attention to the fundamentals and at the same time do as much more as can be done well and profitably. This is by no means a simple problem to solve; indeed, it is perhaps the most complicated and perplexing problem that the student of education confronts. The more important solutions proposed will be referred to briefly in the following sections.

THE EVOLUTION OF THE ELEMENTARY-SCHOOL CURRICULUM IN AMERICA

1650
Reading
Religion

1700
Reading
Writing
Religion

1750
Reading
Writing
Religion
Spelling
Arithmetic

1800
Reading
Writing
Spelling
Grammar
Arithmetic
Geography

1850
Reading and literature
Spelling
Grammar
Composition
Geography
History (U. S.)
Arithmetic

1875

Reading and literature

Writing

Spelling

Grammar

Composition

Geography

History (U. S.)

Arithmetic

Physiology and hygiene

Elementary science

Music

1900

Reading and literature

Writing

Spelling

Grammar

Language and composition

History (U. S.)

Arithmetic

Hygiene

Nature study

Drawing

Manual training

Domestic science

Music

1926

Reading and literature

Writing

Spelling

Language and composition

History (U. S.)

History (World)

Civics and citizenship

Health, including hygiene,
physical training, and
play

Arithmetic

Nature study and agriculture

Industrial and household arts

Music

Drawing

III

ESSENTIALS OF THE BASIC SUBJECTS

It is easy to say that certain "subjects" such as reading, writing, spelling, arithmetic, geography, literature, history, civics, and the health studies should find a place in the elementary-school curriculum. It is far from easy to say just what parts or phases or topics of each of these subjects should be taught. Among the tens of thousands of words in the English language, what words are to be chosen for the exercises in spelling? What processes and topics in arithmetic is it essential for everyone to master? It would take years of intensive study for one to become reasonably familiar with the facts and principles that may be included under the head of "Geography." From this great wealth of knowledge, what facts and principles should be selected as basic elements in the elementary-school curriculum? In all likelihood no single person living today has read all of the books that would be

rated as "good literature." What books, then, shall we have boys and girls read in the elementary school?

These questions suggest at once the difficulties that confront those who try to select and organize materials for the elementary-school curriculum. Until recently there was little effort to solve these problems in a scientific way. Certain topics came to be recognized and emphasized from one cause or another, and those who made courses of study or wrote textbooks accepted these topics, adding to them others, sometimes omitting certain ones of them, but not often trying to learn by careful investigation whether those that were retained were really those for which "all the children of all the people" had the greatest need.

RECOMMENDATIONS OF COMMITTEES

In the last decade of the nineteenth century this "hit or miss" method of curriculum making was modified to some extent by the policy of appointing committees to study the problem and make recommendations regarding the subjects and topics that various types of curriculums should include. In 1893, for example, the National Education Association published the famous "Report of the Committee of Ten." This report dealt chiefly with high-school subjects, but it also had something to say about the elementary-school problem. It was followed in 1897 by the "Report of the Committee of Thirteen," which dealt exclusively with the elementary-school curriculum. In 1909, a report was made by a "Committee of Eight," representing the American Historical Association, on the organization of history materials in the first eight grades. This has had a very marked influence on school practice.

This "committee" method of constructing curriculums was an improvement over the older "hit or miss" method, for it brought serious students of the problem around a council table, and encouraged them to discuss the problem and to come to some form of agreement regarding its solution. The

agreements, however, were not more than a general "consensus of opinion." The reports set forth what members of various committees thought *should be* the important subjects of instruction and the important topics within each subject.

STUDIES OF "MINIMAL ESSENTIALS"

About 1910, however, the problem of determining what the "minimal essentials" of elementary education *really are* was attacked from a new point of view. The curriculum had become so congested and so many new materials were clamoring for recognition that something had to be done. Serious questions were raised regarding the value of many topics that were taught in arithmetic. Other questions were raised with regard to such subjects as penmanship, spelling, geography, and grammar. In the decade that followed, a large amount of careful, scientific work was undertaken in connection with these subjects and others. This scientific study of the problem is still going on, and will continue for a long time to come, for the field is far more complicated than anyone imagined before this type of investigation was undertaken.

THE INFLUENCE OF STANDARD TESTS

The first school subjects to be studied in this new way were arithmetic and handwriting. Through the pioneer work of Edward L. Thorndike, Leonard P. Ayres, and Stuart A. Curtis, instruments were devised for measuring objectively school achievements in these subjects. (See the discussion of tests and measurements, p. 85.) The tests and scales made possible an agreement as to the degree of skill that pupils should be expected to possess at the close of each school year in writing and in the basic processes of arithmetic.

This pioneer work dealt only with school arts concerning the general value of which there was no question. It was an important step forward to know what might reasonably be expected of pupils in the mastery of these arts. It was also

important to recognize that teachers could easily waste valuable time in drilling pupils in these arts beyond the point where the drills were needed to assure a reasonable proficiency. The problem of determining essentials in topics of arithmetic other than the basic processes and in subjects of instruction other than the basic "skill" subjects still remained unsolved.

"FREQUENCY OF USE" AS A FACTOR

It was not long, however, before a method was devised for investigating these more complicated problems. This method is based upon the assumption that the most important topics in arithmetic, the most important words in spelling, the most important facts of geography, and so on, can be determined at least roughly by finding the topics, words, and facts that are used most frequently in the actual situations of life.

This method has been applied most extensively and so far most successfully in finding what words are most frequently used in letter-writing and what processes of arithmetic are most frequently applied by men and women in the ordinary work of everyday life. Thousands of business letters and social letters have been read, and the words carefully tabulated according to their frequency of appearance in these letters. Men and women have kept account of the arithmetical problems that they have had to solve from day to day in transacting their business. These problems have been analyzed and classified so that one can now ascertain readily what items of arithmetical knowledge the average adult is likely to need.

In a somewhat similar way, an attempt has been made to determine the facts of geography and history that are most frequently used. In an early investigation of this type, for example, newspapers and magazines covering a period of ten years were read and the references or allusions to continents, countries, cities, oceans, bays, rivers, mountains, and the like were listed on the basis of the frequency with which they were

mentioned in periodical literature. In the same investigation, references to historical events and historical personages were also listed and classified. These early investigations have been repeated and greatly extended in scope so that here, too, the curriculum maker has a basis for judging the relative worth of certain items of information in these two fields.

A STUDY OF ERRORS

Another approach to the problem has been through the study of the errors that are most frequently made both by children and adults either because they lack entirely the knowledge or skill that would enable them to avoid these errors or because the knowledge or the skill has not been mastered in such a way as to make it available when needed. In teaching spelling, for example, it is well to know not only the words that will be used most frequently in everyday writing but also the words that are most likely to be misspelled, for to the latter, obviously, the principal part of the learning energies should be directed. In arithmetic, too, the most frequently used processes are not all of equal significance to the teacher. It is the *most difficult* of these frequently used processes that demand the bulk of one's time and attention.

It is in the field of language and grammar, however, that the most important work has been done through the study of errors. There are certain grammatical constructions in which the incorrect forms are likely to become matters of habit unless an early effort is made to impress the correct forms. The studies of "frequency of error" have shown clearly what constructions are likely to cause difficulty. The correct forms of these constructions can then be taught and drilled upon in the lower grades. The knowledge of grammatical terms and rules that will be most likely to help the pupil in correcting his mistakes can also be more effectively organized if one knows what mistakes are likely to be made. It is now generally believed that the formal study of grammar should not be undertaken before the seventh grade

(except that such grammatical terms as "subject," "predicate," "noun," and "verb" should probably be defined and illustrated in the sixth grade). Long before the seventh grade, however, the correct forms of speech should be taught and drilled upon. The study of formal grammar in the seventh and eighth grades supplements this earlier instruction. It should rationalize (that is, make clear the reason for) the language forms that have been impressed as habits in the earlier years, and at the same time give the learner a basis for correcting his own mistakes in the future. The study of errors helps in determining what items of grammar need the heaviest emphasis.

JUDGMENTS OF "FRONTIER THINKERS"

One should not infer that the studies of "frequency of use" and the studies of errors will solve all of the problems of the curriculum maker. While these studies are of very great importance, they have some significant limitations. It is true that they inform us as to the skills and the items of knowledge that men and women of today find occasion to use most frequently. The boys and girls of today, however, will be the men and women of tomorrow. In all likelihood, they will still face many of the problems that the men and women of today are facing. In all likelihood, too, some of the problems that they will face will be quite different problems. Is there any way by means of which in the schools of today, we can equip them to solve such problems?

A keen student of the curriculum, Dr. Harold O. Rugg, has attempted this difficult task of looking into the future and trying to predict what problems the next generation will face. He has used two methods. In the first place he has carefully analyzed the great social and economic problems that have persisted over several decades—some of them over several generations. Because of this long persistence he assumes that they will continue to confront mankind for some time to come. He has gone beyond this, however. He has collected the judgments of competent students of social and economic

problems regarding what the future, in their opinion, is likely to bring forth. He calls these students "forethinkers"—that is, the men and women who are best qualified to look ahead and make predictions. Upon the basis of these two methods (supplemented by the methods that we have previously discussed) he proposed a new course of study for the seventh, eighth, and ninth grades which he calls "social science."

While this work is still in an experimental stage, it is well for the teacher to know that it is going on and to follow its progress. It is possible that, even in the school grades below the seventh, curriculum modifications may be made on the basis of such work as Dr. Rugg is undertaking. It is altogether likely, however, that the basic studies of the elementary school are now reflecting in general fundamental needs of civilized society that will persist as needs for generations to come. To meet these needs most economically and most effectively is the primary function of the elementary school. Improvements in the content of the elementary curriculum and in methods of teaching will doubtless be most readily facilitated by the continued analysis of these needs—such an analysis as is represented by the studies of "frequency of use" and studies of errors and difficulties.

IV

TIME ALLOTMENTS

Another difficult problem of curriculum construction is to determine the appropriate distribution of the total available time among the various subjects and activities that make up the curriculum. These "time allotments" vary in different school systems, and even in the same school system there are likely to be variations from year to year. On the other hand, there are some interesting facts that come out when one compares the time allotments of a large number of different school systems as recommended in published courses of study. It is then found that there are certain clearly marked "central tendencies" around which the variations cluster. It

would not be safe to take these "central tendencies" as representing the best and most equitable time allotments, for "averages" in themselves do not tell us what is right or wrong. They may form a starting point, however, for a more thoroughgoing investigation.

The California Curriculum Study undertook such an investigation. Taking first the average time allotments for a large number of city school systems, the results were compared with the actual distribution of time in the schools of the state as revealed by thousands of daily programs made out by the teachers. This was for the purpose of determining in how far the time allotments recommended in courses of study are actually carried out in practice. The next step of the investigation was to analyze all of the scientific investigations that might throw any light whatsoever on the question of proper time allotments. Such investigations unfortunately are not numerous, but they serve as a check on the two kinds of "central tendencies" that were revealed by the analysis of the recommendations found in printed courses of study and by the actual distribution as revealed by the teachers' programs. Finally a suggested allotment was made, based upon all three inquiries. The tables on pages 25 and 26 are taken from the report of the California Curriculum Study and may be helpful to the teacher in the construction of the daily program (see the discussion of the daily program, p. 69). The first table suggests for each grade the total amount of time (in minutes per week) that may well be given to each subject. Table II gives the per cent of time for each subject in each grade, and also classifies the subjects under three heads: (1) the three R's, (2) the fundamental content subjects, and (3) the special or accessory subjects and activities.

V

GRADE PLACEMENT

In the actual construction of an elementary-school curriculum, one of the puzzling problems is to "place in the

appropriate grades the several subjects and the several topics within each subject." The following suggestions are based upon:

(1) A comparison of the grade placements recommended in a number of courses of study published by states, counties, and cities, and ranked by competent judges as "good courses."

(2) The objective studies of "frequency of use," errors, and difficulties mentioned in the preceding section.

(3) Recommendations of the committees appointed by the Department of Superintendence, National Education Asso-

TABLE I

SUGGESTIVE SCHEDULE OF WEEKLY TIME ALLOTMENTS (IN MINUTES PER WEEK) DISTRIBUTED AMONG THE ELEMENTARY-SCHOOL SUBJECTS
(FROM THE CALIFORNIA CURRICULUM STUDY)

SUBJECTS	GRADES								TOTAL
	I	II	III	IV	V	VI	VII	VIII	
Arithmetic.....	.....	140	215	215	220	220	220	220	1450
Language Study....	120	125	165	170	185	190	205	215	1380
Reading.....	435	395	325	245	190	160	145	140	2035
Spelling.....	30	80	85	85	90	80	75	75	600
Writing.....	70	70	75	80	75	70	60	60	560
History.....	} 30	30	45	75	90	110	150	170	640
†Civics.....					20	20	30	35	165
Geography.....	.....	.....	60	130	150	150	120	75	685
*Science.....	25	25	25	25	20	20	20	25	185
Art.....	90	90	90	90	80	75	75	75	665
Healthful Living...	120	120	120	120	125	125	135	135	1000
*Practical Arts.....	25	25	25	30	45	60	85	100	395
Music.....	75	75	75	75	75	75	70	70	590
Opening Exercises..	20	20	20	20	20	20	15	15	150
Miscellaneous.....	.....	.....	.....	.....	50	75	80	90	295
Recess.....	100	100	110	110	110	110	100	100	840
Total.....	1140	1295	1435	1470	1545	1560	1585	1600	11635

*Optional subjects; not included in the list of the twelve prescribed by law in California.

†Including "Morals and Manners."

TABLE II

PERCENTAGE DISTRIBUTION BY GRADES OF THE SUGGESTED WEEKLY TIME
ALLOTMENTS FOR THE VARIOUS ELEMENTARY-SCHOOL SUBJECTS

(FROM THE CALIFORNIA CURRICULUM STUDY)

SUBJECTS	GRADES								TOTAL
	I	II	III	IV	V	VI	VII	VIII	
Arithmetic.....	.....	10.8	14.9	14.7	14.2	14.1	13.9	13.8	12.5
Language Study....	10.5	9.7	11.4	11.6	12.	12.2	12.9	13.4	11.9
Reading.....	38.2	30.5	22.5	16.7	12.3	10.3	9.1	8.8	17.5
Spelling.....	2.6	6.2	5.8	5.8	5.8	5.1	4.7	4.7	5.2
Writing.....	6.1	5.4	5.2	5.5	4.9	4.5	3.8	3.8	4.8
Total for the three R's.....	57.4	62.6	59.8	54.3	49.2	46.2	44.4	44.5	51.9
History.....	1.3	1.2	2.1	4.1	5.8	7.1	9.5	10.6	5.5
†Civics.....	1.3	1.2	1.	1.	1.3	1.3	1.9	2.2	1.4
Geography.....	.....	.....	4.2	8.9	9.7	9.6	7.6	4.7	5.9
*Science.....	2.2	1.9	1.7	1.7	1.3	1.3	1.3	1.6	1.6
Total for the Content Subjects.....	4.8	4.3	9.	15.7	18.1	19.3	20.3	19.1	14.4
Art.....	7.9	6.9	6.2	6.1	5.2	4.8	4.7	4.7	5.7
Healthful Living...	10.5	9.3	8.3	8.2	8.1	8.	8.5	8.4	8.6
*Practical Arts....	2.2	1.9	1.7	2.	2.9	3.8	5.4	6.3	3.4
Music.....	6.1	5.8	5.2	5.1	4.9	4.8	4.4	4.4	5.
Opening Exercises..	1.8	1.5	1.4	1.4	1.3	1.3	.9	.9	1.3
Miscellaneous.....	.....	.....	.....	.....	3.2	4.8	5.1	5.6	2.5
Recess.....	8.8	7.7	7.6	7.5	7.1	7.1	6.3	6.3	7.2
Total for the Special Subjects.....	37.3	33.1	30.4	30.3	32.7	34.6	35.3	36.6	33.7
Grand Total.....	99.5	100.	99.2	100.3	100.	100.1	100.	100.2	100.

*Optional subjects; not included in the list of the twelve prescribed by law in California.

†Including "Morals and Manners."

ciation, as reported particularly in the "Fourth Yearbook" of the department. Only the basic subjects are here considered. The grade placements are given as in the eighth-grade elementary school. In the junior-high-school organization the basic subjects are sometimes continued through the seventh and eighth grades as here indicated. In other instances, the program of the seventh grade and especially of the eighth grade has been organized on a somewhat different basis. Suggestions as to the latter type of organization will be found in Volume X, page 3.

READING AND LITERATURE

GRADE I. The emphasis in Grade I should be almost exclusively upon reading. This includes, however, the provision of experiences and activities which will give the pupils motives for wishing to learn how to read and which will also make the reading meaningful. (See the discussion on teaching beginners to read, Vol. II, p. 3.)

GRADE II. Oral and silent reading, using if possible a wide range of reading materials, taking care that these are within the comprehension of the pupils. There should be more emphasis upon silent reading than in Grade I. (See the discussion of silent reading, Vol. II, p. 218.) Reading is the basic subject of Grade II, as of Grade I.

GRADE III. Reading still continues to be the most important subject, but the number work also comes into prominence in this grade. In reading, the emphasis should be upon both oral and silent reading, with increasing stress on the latter. As in Grade II an attempt should be made to provide a wide range of reading materials.

GRADE IV. More emphasis on silent reading without, however, entirely neglecting oral reading. The reading of books at home should be encouraged. (See suggested books for pupils of this grade given in Literature, Vol. VI.)

GRADE V. Emphasis on silent reading. Guidance of home reading. The mastery of the mechanics of reading should be

well in hand by this time, although steps will doubtless be needed to correct bad reading habits (lip-moving, poor eye-movement, etc.) in some pupils. (See Reading, Vol. VI; Literature, Vol. VI.)

GRADES VI, VII, VIII. The work here should be largely the study of literature, with occasional oral reading. (See reading lists, Vol. VI, pp. 426-32; Vol. X, pp. 326-31.)

ARITHMETIC

GRADE I. Arithmetic is not now considered a basic subject in Grade I. There may well be some informal number work, however. In their reading lessons and in their plays, games, and other activities, the pupils will have occasion to count and to practice counting. They will also learn to read the one-place numbers at least. Some courses make a definite requirement that reading, writing, and counting numbers be carried from 1 to 100.

GRADE II. Continuation of the informal number work of Grade I. Counting as needed in games and other activities. Making change in "playing store." Measuring by inches, feet, yards, pints, quarts, gallons in construction work of various types. Reading of two-place and three-place numbers. Roman numerals, I to XII, in telling time.

In certain prominent courses the work is extended to include a considerable part of the addition tables, with applications, and the corresponding facts of subtraction. Certain elementary multiplication facts are also included.

GRADE III. Arithmetic now becomes a subject of basic importance, although still less significant than reading. The emphasis in Grade III is on addition of one-place and two-place numbers, and upon subtraction up to 9 from 18. Accuracy should be the watchword here, and pupils should be taught to "check" or prove their own computations. Reading and writing numbers to 1000. Multiplication and division "facts" up to 5×5 and $25 \div 5$. Use of United States money and, in this connection, first acquaintance with the

decimal point. Measuring by various units suggested by construction work and by games. Some courses include the entire multiplication table, multiplication by two-place numbers, and short division by one-place divisors.

GRADE IV. Arithmetic now becomes, probably, the most significant of the basic subjects. The emphasis in Grade IV should be upon multiplication and division. Multiplication to 9×9 , and application of the facts to the multiplication of two-place and three-place numbers. Along with the simple multiplication facts, the converse division facts may well be taught. Also short division as a process, and toward the end of the year, long division. Continued use of measures.

Certain courses include multiplication and long division with three-figure multipliers and divisors, but in general two-figure numbers are used.

GRADE V. Further practice in multiplication and division with increasing attention to problem-solving in the applications of arithmetic. The principal emphasis in Grade V, however, is upon common and decimal fractions. Daily reviews of addition, subtraction, multiplication, and division "facts." Emphasis upon accuracy and upon checking and proving the computations. Tables of denominate numbers taught so that they will be understood and used as reference. Only the more commonly employed tables are memorized.

GRADE VI. Continuation of drills on fundamental "facts." The principal emphasis in Grade VI is upon percentage and interest and their application to simple business situations. The keeping of simple accounts. Measurements of area.

GRADE VII. The principal emphasis here is the application of percentage and interest to problems of buying, selling, borrowing, and lending. Some references to the work of banks. Measurements of area and volume. Continuance of drills on fundamentals for those who need it.

GRADE VIII. The emphasis in Grade VIII is upon the application of arithmetic to the problems of home life and business. A further study of the work done by banks. A

study, also, of insurance, taxes, and such investments as are represented by stocks, bonds, mortgages, real estate, and insurance.

LANGUAGE AND GRAMMAR

GRADE I. Informal language work based on the reading lessons, on the construction work, and on games and other activities. Almost exclusively oral. This should aim primarily to promote free discussion and practice in the oral use of new words.

GRADE II. Continuation of informal oral language work with more emphasis upon good articulation and enunciation. Written language work growing out of the reading lessons and out of plays, games, and constructive activities. Emphasis on use of capital and period.

GRADE III. Here the language work more nearly partakes of the nature of a "basic" subject. Much oral work with training in clear articulation and good sentence structure. Correction of major errors with an effort to get the proper speech habits well fixed. Writing of letters and of short compositions based on oral discussions, on readings, on construction work, and on school and home experiences. Punctuation.

GRADES IV AND V. Continuance of oral and written language work described for Grade III, with increasing emphasis on correct language forms both in oral speech and in writing.

GRADE VI. Continuation of work described for preceding grades but with a beginning effort to have the pupils understand something of sentence structure. In this connection an informal beginning may be made in teaching such terms as subject, predicate, noun, verb, modifier.

GRADE VII. Continued emphasis upon correct habits of oral and written language, accompanied by definite instruction in those elements of grammar that help one in forming good speech habits and in understanding the rules and principles of grammatically correct expression. The more formal study of language becomes one of the most significant of

the basic subjects which are studied in Grade VII.

GRADE VIII. A continuation of the work of Grade VII.

WRITING

GRADE I. Writing of words in connection with the reading lessons. Chiefly blackboard writing. Little formal drill. Practice in careful formation of letters.

GRADE II. Writing here becomes an important "basic" subject. There should be short daily drills with an emphasis on the large "muscle" movements. A suggested standard that pupils may be expected to attain at the close of Grade II is Quality 35 on the Ayres scale (see this scale, Vol. VIII, p. 152), and a speed of 30 letters a minute.

GRADE III. Continued drills with, of course, some assignments for written lessons in connection with other subjects. Correlation with language work especially (see p. 30). At the close of the year pupils may be expected to attain the Ayres Quality 40, and a speed of 40 letters a minute.

GRADE IV. Continued drills with emphasis upon the finer muscular coordinations. Written assignments in connection with language and other subjects. Standards at the close of the year, Quality, 45, speed, 50 letters a minute. As a school subject, penmanship reaches its "peak" of importance in Grade IV, for here we begin to refine and develop the child's writing habit.

GRADE V. Some formal drills, but less emphasis upon these than in Grade IV. Much stress upon good writing in connection with other school subjects. Standards: Quality, 50; speed, 60 letters a minute.

GRADE VI. Still less attention to the formal drills except as individuals may need more drill to bring them up to an acceptable standard. Standards: Quality, 60; speed, 65 letters a minute.

GRADES VII AND VIII. No formal drills except for those who fail to show improvement over the sixth-grade standards.

GEOGRAPHY

GRADES I AND II. No formal geography.

GRADE III. The geography of the local community. Toward the close of the year, an initial study of the world as a whole, with simple oral descriptions using the globe.

GRADE IV. Geography of the state or province. This should be concluded by a second view of the world as a whole, pointing out the place of the state or the province in the larger unit. Geography here becomes a significant basic study.

GRADE V. In this grade and in Grade VI, geography reaches the peak of its significance. For Grade V, the intensive study of North America and South America is recommended, most of the time being given to North America.

GRADE VI. In Grade VI, the remaining divisions of the earth's surface should be given a similarly intensive treatment—Europe, Asia, Africa, Australia.

GRADES VII AND VIII. In correlation with the work in American history, the geography work in Grade VII may well treat of the United States in relation to the rest of the world. This treatment is also suitable for junior high school.

HISTORY

There is probably more disagreement regarding the grade-placement of history in the elementary school than regarding any other subject. In 1909, the Committee of Eight, appointed by the American Historical Association, made a series of recommendations that have been very influential, and most of the school systems today follow more or less closely the outline suggested by this report. About ten years later, a second Committee of Eight, representing this time the American Historical Association, the National Education Association, and the American Council on Education, proposed a somewhat different arrangement of topics, certain features of which have been adopted by many school systems. The development of the junior high school has led to still

other proposals, the most important of which, undoubtedly, is Dr. Harold Rugg's plan of uniting history with civics and geography in a "social studies" course to be given in these grades. The chief proposals of the first Committee of Eight may be summarized as follows:

GRADES I AND II. Stories of the tree dwellers, the cavemen, and Indian life. Stories and exercises in connection with Thanksgiving Day and Washington's Birthday. Stories illustrating local history.

GRADE III. Stories of heroes of other times: Joseph, Moses, David, representing Biblical heroes; Ulysses and Alexander, representing Greece; Cincinnatus and Horatius, representing Rome; William Tell, Roland, Canute, Alfred, Robert Bruce, and Joan of Arc, representing medieval Europe; Columbus. (See Vol. V.)

GRADE IV. American explorers: Columbus, Magellan, Cabot, Drake, Raleigh, Champlain, and Hudson. Virginia life: John Smith, Pocahontas; industries, manners, and customs of first settlers; relations with Indians. New England life: Miles Standish, John Winthrop, John Eliot, King Philip; industries, manners, and customs of the New England settlers. Leaders in other colonies: Peter Stuyvesant, William Penn, James Oglethorpe; manners, customs, and industries of the early settlers in New York, Pennsylvania, and Georgia. New France: La Salle. The early life of Washington and Franklin.

GRADE V. Events immediately preceding the Revolution with especial reference to: Patrick Henry, Samuel Adams, and Benjamin Franklin; the Revolution: Washington, Franklin, Nathan Hale, Nathanael Greene, Morgan, Marion, Paul Jones, and Lafayette; Daniel Boone and George Rogers Clark, representing the conquest of the West; Washington, Jefferson, Eli Whitney, Lewis and Clark, representing the early years of the Republic; the story of the steamboat, the Erie Canal, the first railroad, and the telegraph, as illustrating the progress of invention and transportation; events connected with the lives of Houston, David Crockett, Fremont, and Kit Carson, typifying the early development of the Southwest; of Webster, Clay, and Calhoun in connection with the slavery controversy; of Lincoln and Lee as outstanding heroes of the Civil War.

GRADE VI. A study of the European background of American history, involving the following large topics: (a) Where Americans came from; (b) what Americans started with (a study of some ancient inventions); the Greeks and what we have learned from them; the Romans, how they learned from the Greeks, and what they have taught us; the geographical conditions that shaped

Teutonic life; the geographical routes and trade between the East and West; the discovery of the western world.

GRADES VII AND VIII. In these grades, a systematic study of the history of the United States is usually undertaken. The Committee of Eight proposed to have the work of Grade VII carry the pupil to the close of the Revolution, while the work of Grade VIII was to complete the story of the Nation's development. The tendency today, however, is to give more attention to recent history. In consequence, the work of Grade VII may well take account of the various periods up to 1860, leaving for Grade VIII the intensive study of the Civil War and the decades that have followed it.

The second Committee of Eight proposed, in effect, that American history be made a somewhat more important subject in the intermediate grades than had been customary in American schools. The plan really involved covering in a fairly comprehensive and systematic manner, in Grades III, IV, V, and VI, the events of our national history, thus leaving Grades VII and VIII free for a study of world history, with particular reference to the bearing of world history on American history. The latter part of this recommendation has met with a goodly measure of approval.

In preparing the sections on history for **THE CLASSROOM TEACHER**, an attempt has been made to provide materials that will be helpful under either of these arrangements. In intermediate-grade history (Vol. VIII) the main emphasis is given to the biographical approach, as recommended by the first Committee of Eight, but an effort has been made to provide numerous helps in case the treatment proposed by the second Committee is used. If Grade VI is given over to the European background, the teacher will find this phase of the work treated in Volume XI. The suggestions for Grades VIII and IX in the same volume will also be valuable to the teacher who is teaching American history in Grades VII and VIII according to the proposals of the first Committee.

William C. Bagley

STARTING THE WORK
OF THE
SCHOOL YEAR



By

WILLIAM C. BAGLEY, Ph.D., Ed.D.

Professor of Education
Teachers College, Columbia University

STARTING THE WORK OF THE SCHOOL YEAR

I

THE IMPORTANCE OF THE RIGHT START

IN WHATEVER work one undertakes, there is always a distinct advantage in making the right start. In the work of teaching, this is especially true. At the beginning of each school year almost every teacher meets a new group of pupils. With these pupils he or she in time will become intimately acquainted. Four or five hours of every school day will be spent with them; and as the days grow into weeks and the weeks into months, teacher and pupils will come to know one another with a thoroughness that few other types of work afford. This relationship of teacher to pupil is so intimate, so personal, and above all so rich with opportunities for growth and service, that no effort should be spared to realize its possibilities in the fullest measure. To make the right start is the first step to be taken toward this goal, and it is one of the most important steps of all.

WHY A RIGHT START IS IMPORTANT

The importance of a good beginning, of course, has long been recognized. It is expressed in such maxims as "Well begun is half done" and "First impressions are lasting."

Maxims and proverbs which endure through the ages almost always have within them at least some germs of basic truth. It is one of the objects of the science of psychology to explain these truths—to find out *why* they are true. As yet many of these explanations are only partial, for psychology is a young science and the facts that it studies, while apparently simple at first glance, often turn out to be very far from simple when one seriously tries to trace them to their causes. With respect to the fundamental truth expressed in the maxim, “Well begun is half done,” one can go at least a little way below the surface:

1. It has been discovered by experiment that the initial events in a long series of related events usually stand out more strongly in memory than do the others, except, possibly, the final or terminal events of the series. One is likely to recall, for example, the first and last events of a long journey much more clearly than the intervening events. The latter tend to become blurred in a person’s memory—to fuse or coalesce.

2. Because of the distinctness or clearness of the initial events, they tend to give their own tone or color to the whole series. If they are unpleasant, depressing, confusing, or embarrassing, the later experiences associated with them are likely to have the same characteristics; at the very least, there will be a distinct handicap in overcoming the unfavorable conditions. On the other hand, if the initial events are fairly pleasant, if they inspire confidence rather than discouragement, the subsequent experiences will tend to take on these qualities; at the very least, there will not be a needless handicap.

3. What has just been said suggests the emphasis that present-day psychology lays upon “attitudes of mind” or “mental sets.” These are, in truth, most fundamental. They constitute the background of mental life. They determine very largely the way in which one views life and acts toward people. They have a direct and important bearing upon the “will to work,” and upon success or failure in one’s work.

They are of very great significance in determining how well one will get on with one's fellows. To insure "right attitudes" is now recognized as one of the important aims of education. From the point of view of the present discussion, it may be safely said that the initial events in any series of experiences have a powerful influence in determining attitudes that are likely to persist through the series. Whether it be the first day of the school year; the first class or exercise of any school day; the first steps in a new subject of study; or the first stages of any lesson, the teacher may well hold to the principle, *All beginnings are important.*

LIMITATIONS OF THE RIGHT START

It is an irritating fact regarding maxims and precepts that they are almost always subject to limitations, qualifications, and exceptions. Human conduct is so complicated that iron-clad or unvarying rules can seldom be laid down. The maxim, "Well begun is half done," is obviously not always true. Two of the more important limitations of the principle may well be emphasized at this point:

1. If the "good beginning" is followed immediately by a series of blundering, confusing, or boring experiences, the effect is likely to be that of an anticlimax. The interest generated by the favorable start may be even worse than lost, for the sharp contrast may easily have a negative influence. A good beginning is important, but it is not the only important factor in success.

2. In the work of education, it is easy to mistake a superficial, spectacular interest and a boisterous, excited enthusiasm for a fundamental interest and a truly effective enthusiasm. Excitement, in the usual sense of the term, is probably not favorable either to mental growth or to the best mental work. An "excited" beginning multiplies the chances that the steady and persistent application which is so thoroughly essential to real education will appeal to the learner as an anticlimax.

II

A GOOD START FOR THE SCHOOL YEAR

In planning for the first few days of the school year, it is well to have in mind certain qualities that should characterize the work of this initial period if the advantages of a good start are to be fully realized.

In the first place, there is general agreement among school administrators that serious and systematic schoolwork should begin at the earliest possible moment. To permit pupils to gather and sit idly while various details of admission and organization are being looked after by more or less distracted teachers is certainly not to make a favorable beginning. In the best school systems, even on the first day of school, one will find the regular program of "lessons" in full swing within thirty or even fifteen minutes of the time of opening. This is in harmony with a rule that follows as a corollary from the principles that we have been discussing; namely, *the right start should reflect the most important features of the work that is to follow*. By far the most important feature of good school work is the aggressive attack by the learner upon the problems that the school involves. There is certainly no advantage, and there is a very real risk, in delaying this attack. An unnecessary delay is one that can be avoided by taking the right preliminary steps. These will be referred to presently.

A speedy beginning of the serious work of the school will obviously do much to prevent the confusion, disorder, and consequent excitement that the opening of school is otherwise likely to involve. If the pupils settle at once into the "learning attitude," the chances are greatly multiplied that this attitude will quickly become a matter of habit. On the other hand, if the first day or the first two or three days are devoted solely to "getting ready" for work, the task of acquiring the work attitude will be increasingly difficult. One of the deadliest enemies of success is procrastination, and any feature of school government (or misgovernment) that encourages procrastination is to be condemned.

If the right start should reflect the most important features of the work that is to follow, then the opening day should be characterized by pupil activity in learning and pupil cooperation in class management. From the very outset, certain definite responsibilities should be very clearly delegated to the pupils themselves. Even on the first day, an effort should be made to get from *every* pupil a contribution both in the way of a response in the discussion of a lesson and in the way of some useful service to his fellows. Again, this is something that cannot be begun too soon because the longer it is delayed the more difficult it is to establish the favorable attitude. It is a good test of a good beginning if every pupil at the close of the first day can state both something that he has learned for himself and something that he has done for the school or for his fellows.

Another corollary from our principle is that the experiences of the opening day, so far as is humanly possible, should be positive and encouraging rather than negative and depressing. A speedy beginning of serious study and an effort to give to each pupil an opportunity to contribute a definite something to the work of the group will do much to insure a happy outcome here. But other things may be done, too, and certain dangers may be avoided. Pupils new to the group may well be looked after at recess time and at the noon intermission by committees of the pupils who have been members of the group during the preceding year. Care may be taken in directing class discussions to keep the questions and topics well within the comprehension and attainments of the pupils—to the end that the danger of “failure” in recitation (obviously unjust at this time) may be avoided. Allowance may certainly be made for the awkwardnesses and mistakes that everyone is liable to in strange situations.

SOME OBSTACLES TO OVERCOME

It is a far simpler matter to set up an ideal than it is to make definite and helpful suggestions toward attaining the

ideal. It would be a serious error to assume that the conditions described in the preceding paragraphs are easily realized. An understanding of the obstacles that frequently stand in the way of a favorable start should be of service in insuring at least an approach to the ideal.

The most formidable obstacles arise undoubtedly in the one-teacher rural school, especially if such a school is relatively large and enrolls pupils representing all of the elementary grades. If it is a new school, just opening, the difficulties are very greatly increased, and they are likely to be serious enough if a number of pupils new to the community are enrolling for the first time. In a school employing two or three teachers, the difficulties are less numerous, and they decrease as the school becomes larger, more generously staffed, and more liberally supervised. We have said that in good city school systems, the work of the year is often well under way within fifteen or thirty minutes after the opening on the first day. This is made possible by an established organization, the careful gradation of pupils and their movement from grade to grade in homogeneous groups, a building principal (sometimes with an assistant) who looks after the reception and placement of new pupils, a uniform and detailed course of study that states definitely what is to be accomplished in each grade each half-year and often each month, and not infrequently free textbooks and free supplies which enable the teacher on the first day of school to make use of teaching materials in abundance.

These advantages may be contrasted with the handicaps which are not unlikely to confront the teacher in a one-room rural school on the opening day of the year. Here the pupils may represent all grades from beginners to those nearly ready for high school. Several new pupils may come in from other districts, without credentials of any kind and often with very hazy ideas as to where they belong on the educational ladder. The task of classifying new pupils will devolve upon the teacher alone without help from a principal or supervisor. Sometimes no adequate course of study is avail-

able for guidance. Seldom are free textbooks and free supplies furnished. Obviously, the task of getting the school work well started under such conditions will not be easy. And yet, if the right steps are taken, it is not impossible to make a fairly substantial beginning even on the first day. Because practically all of the serious problems of the opening of the school year are reflected in the situation that the teacher of the one-room school confronts, the following discussion of ways and means of solving these problems will be directed chiefly toward this situation.

III

PREPARING AHEAD FOR THE FIRST DAY

Foresight is one of the most trustworthy signs of intelligence. The kind of ability that makes for success is not often caught unawares. It anticipates serious problems and prepares in advance to meet and solve them. Sometimes, of course, in constructing in one's imagination the situation that must be confronted in the future, one misses important, perhaps crucial, elements. Then one's plans must be changed or perhaps even abandoned when the test comes. But the occasional failure of one's projected solution for a difficult problem should not discourage one from further efforts. It is not too much to say that even a plan of action that has to be given up is better than no plan at all.

For the sake of clearness and concreteness, let us consider the steps that a young teacher, without previous experience in school work, will find it profitable to take in preparing for the opening of the school year. We shall assume that this teacher has accepted an appointment in a one-teacher school in a district with which she is not well acquainted.

A PRELIMINARY VISIT TO THE SCHOOL

If the appointment comes before the end of the preceding school year, one will find it most profitable to visit the school

while it is still in session. As a matter of courtesy, before making this visit one should ask permission of the teacher in charge. The visit itself should be carefully planned, for the new teacher should get not only a general impression of the school situation, but a number of very definite facts about the pupils, their work, the equipment of the school, and the community in which she will serve. The more important of these may be listed as follows:

1. If the county superintendent has not already supplied a copy of the course of study, one should ask to borrow a copy from the retiring teacher. In any case, one should learn from the teacher the subject-matter that has been covered by the various groups during the year, and the point from which in each subject the work of the following year should proceed. The titles of the textbooks and the names and addresses of the publishers should also be noted.

2. The retiring teacher will probably be glad to show how the records are kept, and to give advice as to the reports that are necessary, and when and how they are to be made out. Definite notes should be taken, for one's memory of details is likely to be hazy after the lapse of two or three months.

3. For purposes that will be referred to later, it will be advantageous to make a sketch of the plan of the building and grounds, showing the number and location of the pupils' desks, the position of the blackboards, the location of cloak-rooms, workrooms, closets, toilets, and the like.

4. The material equipment of the school should be studied to learn what is available in the way of reference and supplementary books; maps, globes, and charts; tools and equipment for gardening, domestic science, and other types of industrial art; and (especially) materials for such "seat work" as word-building, sentence-building, number work, and the like, and any stock of pencils, pens, and paper that will be available on the opening day.

5. The incoming teacher should be careful to learn what specific phases of school work have been especially emphasized by the retiring teacher. Certain general weaknesses

(say in arithmetic, writing, spelling, or reading) may have been revealed by tests, and the teacher may have been carrying on a definite program of work designed to correct these defects. It is altogether likely that certain phases of this program will need to be continued if the best results are to be realized—or, indeed, if the work already done is not to be wasted. Then, too, the teacher may have been trying to establish certain specific habits of speech or carriage or “good manners” which should not be permitted to lapse. Because of the frequent changes of teachers in American schools (and especially in rural schools) it often happens that promising beginnings are made by conscientious and intelligent teachers only to be lost because their successors fail to find out what has been done. (For this reason, it is recommended that a teacher in giving up a position leave, where the next teacher will be sure to find it, a brief statement of the projects that have been started, pointing out particularly those that should be continued if the preliminary efforts are not to be wasted.)

6. It will be helpful to observe some of the class work if the retiring teacher extends the invitation; and this invitation should be particularly welcome if the retiring teacher happens to be especially competent. In any event, a definite picture of the school at work will be a distinct advantage in preparing for the opening day. On the other hand, the attitudes and responses of pupils vary so widely with different teachers that it is unsafe to generalize hastily as to what children can or cannot do. A similar caution is needed in interpreting any comments that the retiring teacher may be tempted to make regarding the pupils, the school, or the community. It is better as a rule to enter a situation without the prejudices against persons that may easily be aroused by remarks of a “gossipy” nature. Bright, average, and dull children are to be found in almost every pupil-group; cordial, indifferent, and “cantankerous” parents are represented in practically every community; but both in the school and in the community, the new teacher’s relations with pupils and parents may be quite different from those of the former teacher. Some

things can be determined in advance, but judgments of persons ought not to be made hastily nor on hearsay evidence.

7. What has just been said must not be interpreted to mean that the incoming teacher should not, on this preliminary visit, learn many important facts about the community in which she is to work, nor about the pupils for whom she will be responsible. There are many *objective* facts acquaintance with which will be very important in making possible an effective adjustment to the situation: Is it predominantly an agricultural, a mining, a lumbering, or a suburban community? Is the population predominantly stable or predominantly "floating"? Are the farmers owners or renters? If a community of immigrants, are they from northern Europe, from southern and southeastern Europe, from Mexico, from the Orient? What language difficulties are likely to be presented by the pupils just entering school? Are the older children likely to have heavy home duties in the way of housework or farmwork? And it is certainly well to know something of community standards and prejudices with reference to what is expected of the teacher in the way of church attendance, going to dances, playing cards, and the like. This is not to say that the teacher is in duty bound to accept every standard or every prejudice of the community in which he or she is employed. It is only to say that a blundering ignorance or a headstrong defiance of local standards and prejudices may work a world of mischief without accomplishing an iota of good.

8. It will of course be in order on this preliminary visit to meet the members of the local school board or school committee. One will do well, also, to learn what organizations there are in the community that are particularly interested in the work and progress of the schools—the Parent-Teacher Association, the Grange, the Farm Bureau, women's clubs, and the like—and, if time permits and it seems otherwise desirable, to meet the leaders of these organizations.

In many cases, of course, it will be impossible to make a preliminary visit to the school while it is in session. One's

appointment may come late in the summer, or even a few days before the school is to open. Even under these conditions, however, the building can be studied, the equipment noted, and many things learned regarding the community. In any event, one should obtain at the earliest possible moment a copy of the course of study and copies of the principal textbooks to be used. The preceding teacher may also have left records or memoranda regarding the work that the various groups have completed, or the points reached by each group at the close of the year. The county or district superintendent or commissioner (whom the teacher, of course, should consult freely) will be able to give helpful information regarding the work of the preceding year, as well as advice as to the specific ground to be covered in the year ahead and as to the best way to become adjusted to the community.

LEARNING ABOUT THE COURSE OF STUDY

Armed with textbooks and course of study, and with whatever information and advice may have been gathered from visits and conferences, one will be in a position to proceed systematically with the detailed work of preparation. Perhaps the best "first step" is to make a general survey of the course of study requirements. Again this is a much simpler problem for the teacher who is responsible for the work of only a single grade than it is for the teacher of the one-room school who must try to cover all of the subjects of all of the grades. We are assuming, however, a teacher who is facing the latter more difficult task. If, as sometimes happens, the course of study is printed in a volume of from 100 to 200 or more closely printed pages, treating in a good deal of detail the work of each grade in every subject, it may not be easy to get a "bird's-eye view" of the whole. It is a good plan to begin with the requirements in the "basic" or "trunk-line" subjects, disregarding for the time being the supplementary subjects.

As will be noted in the discussion of the curriculum (see

p. 9), the basic subjects are not the same for all of the grades. The outstanding first-grade subject is reading, and reading continues to be a subject of major importance until the fourth or fifth grade is reached. In the meantime, arithmetic has come prominently into the foreground—usually in the second grade but in the better school systems not until the third grade. From the fourth grade on arithmetic plays a leading rôle. Spelling assumes large importance in the third grade. Geography makes a somewhat serious appeal in the fourth grade, but does not reach its “peak” of significance until the fifth and sixth. Language (or composition), as a separate study, shows increasing importance from the third grade on and may culminate in grammar as a major subject in the seventh or eighth grade. History, as a basic subject, usually appears in the fourth grade but does not assume major importance before the sixth grade or the seventh grade.

To build up an initial conception of the elementary course of study, then, it is a good plan to follow through first the grade requirements in reading, noting what is required in the first grade, the second grade, and so on up to the point where reading merges into “literature.” The requirements in arithmetic may well come next. These requirements are often stated in the form of pages of the textbook to be covered, so that one will need the textbook at hand to discover what the actual materials to be taught and learned really are. It will sometimes happen that one is “rusty” on certain of the topics, especially in the upper-grade work, and an important advantage of this survey of the course of study requirements lies in the fact that these weaknesses may be located and corrected before school opens. This is obviously better than to be forced later to confess one’s errors in “open court” so to speak! The same general plan followed with the other basic subjects will enable one in a relatively brief period of intensive study to make a preliminary chart of the voyage that lies ahead. At least one will know the chief destination and the principal ports of call, and perhaps glean a suggestion of the more troublesome currents, reefs, and headlands.

PLANNING FOR EACH GRADE GROUP

With this as a general background, the work that should be undertaken first by each grade group may be mapped out in a more detailed fashion, following the specified requirements of the course of study for each of the basic subjects. It is possible, of course, that not all of the eight grades will be represented in the school. In the actual organization of the daily program of recitations and exercises, too, it will be necessary to combine two or more grade groups in certain subjects. Unless one has definite information regarding the number of pupils in each group, however, it will be well to plan for separate classes in the most important *basic* subjects of each grade. It may be possible later to combine groups even in basic subjects, but, aside from spelling, writing, and geography (which lend themselves rather readily to treatment in combined groups), the principal combinations are likely to be made in the non-basic or accessory subjects, such as nature study, music, drawing, and the industrial arts. Even if there be but one or two pupils in the sixth grade, for example, the systematic progress of the pupils in the subjects basic to this grade should be definitely provided for. Then, too, combinations can be made much more intelligently later on if one has already prepared a clear statement of what each group must accomplish.

While it will take some time and effort to construct an outline of the course of study, the investment will pay a large dividend both in the ease with which the real work of the school year gets under way and in the confidence with which the teacher can face the complicated problems incident to the opening of school. With an outline before one, the task of classifying new pupils will be greatly simplified, the construction of the daily program or time-table can be attacked intelligently, group combinations can be effected with some degree of justice, and the detailed planning of the first lessons can be undertaken in a proper perspective of their relation to the work of the entire year.

The preceding paragraphs have assumed that the teacher is young and relatively inexperienced, and that the situation that this teacher is facing is the most complicated and difficult of all teaching situations. The same general suggestions would apply, however, to any teacher who is about to begin work in a new community or in a grade in which he or she has not taught before. The task of preparation for the work of a single grade or the work of two or three grades is much simpler, of course, than the task of preparing for a one-teacher school where all the grades may be represented; but it is no less important. Its greater simplicity should enable one to make a far more thoroughgoing and detailed preliminary study of the problem than would be possible under the conditions that we have been assuming.

PLANNING THE FIRST DAY'S PROGRAM

With the outline of the work completed, one will be ready to plan specifically for the first day and for the two or three days that follow. Again taking the one-teacher rural school as our example, let us try to construct in imagination the situation that will confront the new teacher. The pupils will arrive in groups, many of them very early. Some will be brought by older sisters and brothers; others by their mothers or their fathers. Some of the mothers, especially, may remain for an hour or two, perhaps for the entire morning. It will be a trying time for the new teacher at best, but if a fairly definite program has been prepared, the danger of confusion will be reduced to a minimum, and it is confusion that would cause the most serious embarrassment. What, then, should be the program?

There are, of course, many ways of handling the situation more or less successfully, and one would be rash to assume that his or her way is the best. At the same time there are certain questions that will inevitably arise to which fairly definite answers may be suggested. For example, shall we on this first day begin school "on time" or shall we give a leeway

of fifteen or twenty minutes to let laggards arrive? When we begin, shall we have "opening exercises" or formalities of any kind, or shall we proceed at once to the organization of the school and the assignment of lessons? Shall we have recess periods? Shall we have school all day, or shall we omit the afternoon session?

Some of these questions may possibly be debatable, but the consensus of opinion among experienced and successful teachers and school administrators justifies rather terse and somewhat dogmatic advice regarding most of them. School should certainly begin "on time." If the recess periods are to be part of the regular school routine (and the clear tendency of authoritative opinion is in their favor), then they should be a feature of the first day's program. School should be in session during the regular school hours throughout the day (although this does not mean that the pupils in the lower grades should remain until the close of school).

"OPENING EXERCISES" ON THE FIRST DAY

The questions regarding opening exercises and the order in which the work of the day should be taken up are not to be answered so dogmatically. There is much to be said for opening exercises of some sort immediately after the pupils have assembled at the call of the bell and taken seats. (Permanent seats, of course, will be assigned later.) The advantages of opening exercises on each school day are discussed on page 547 of this volume. They have all of these advantages on the first day—and some in addition. In the first place, if properly conducted, they are a steadying influence at a time when both teacher and pupils are likely to be a bit excited. In the second place, the little note of formality that they involve suggests a dignity that befits a great institution—and the public school is a great institution even though some of its units may happen to be housed in one-room buildings. In the third place, opening exercises give to the teacher an opportunity to introduce himself or herself to the pupils.

Whatever may be one's attitude toward religion there is little doubt that simple devotional exercises form a most effective beginning for the work of the day or for the work of the school year. Merely as literature, the Bible and certain of the great hymns have a depth and a dignity that are unsurpassed. To read a brief passage from the Bible, to recite in unison the Lord's Prayer, and to sing together a familiar hymn is a good way to start almost any collective enterprise. Such a beginning of each school day is ordained by law in one of the American states (Massachusetts). In a few other states, on the contrary, the law prohibits anything in the way of devotional exercises in the public schools; while in certain communities the practice is effectively banned by public sentiment which has the force of law.

If devotional exercises of a religious character are either impossible or inadvisable, much can still be done with secular or non-religious materials. Passages from literature—whether prose or poetry—at once suggest themselves; but whatever is chosen from this source for opening exercises, we believe, should be fine and strong in its meaning and beautiful in its form. Even though its full significance may not be understood by all of the pupils, the beauty of form will come gradually to make its appeal, and there is an often overlooked educational value in accustoming young children to the words and tones and cadences in which great thoughts are expressed and great ideals crystallized—even though they may wait years before the thought is fully grasped or the full worth of the ideal appreciated. Secular education may well take a lesson here from the forms of religious education that have been unquestionably effective through the centuries.

Another suggestion for opening exercises, and one peculiarly appropriate for the first day of school, is to make use of the finer materials of a patriotic nature. The great national anthems, "My Country, 'Tis of Thee" and "America, the Beautiful," have an undisputed place here (see the departments on Music, Vols. IV and VII, for patriotic songs); and there are poems and prose selections that embody the

most worthy of our national ideals in a form at once simple and impressive.

It will be noted from the preceding discussion that the idea of "opening exercises" implies a real seriousness of purpose. What one should have uppermost in mind in planning for them is *to start the work of the day or of the year on a high plane*. They should be characterized by seriousness and a simple dignity. There will be opportunities at other times to strike the lighter notes.

To the preparation of the actual program of opening exercises for the first day of school, one may well afford to give detailed consideration. The first "formality" (which should be quite "informal") is for the teacher to introduce himself or herself by name with the title "Mr." or "Miss." It is well also to write one's name on the blackboard. An opening song is then very distinctly in place, followed by the reading of a short poem or prose selection suited to the occasion. Another song may well close the exercises.

Needless to say, if a program of this sort is to be carried out successfully, the teacher should be able to do at least two things: lead in singing and read well. Deficiency in the former ability is always a handicap to the elementary-school teacher, but it need not and should not prevent singing in the school, for among the pupils there is almost certain to be at least one with sufficient musical talent to get a song started. Inability to read well, however, is a defect for which it is hard to compensate in any effective way; on the other hand, it is a defect that is usually remediable. The emphasis that has been laid in recent years on "silent reading," while clearly justified and in many ways wholly admirable, has had in some cases the unfortunate tendency to belittle the importance of oral reading. It is true, as the advocates of silent reading have so often asserted, that very few people find it necessary in adult life to do much oral reading, while everyone practices silent reading. Teachers, however, happen to belong to the small minority who must know how to read aloud. In the elementary school, indeed, a teacher who

can read exceptionally well has a very valuable professional asset; and, as we have suggested, it is an art that almost everyone can acquire with a little practice. To prepare effectively to conduct opening exercises may provide a motive for such practice.

PLANNING FOR THE FIRST ASSIGNMENTS

After the plans for opening exercises have been made, a quite different phase of the first day's work will call for some preliminary attention. The pupils must be classified, the school organized, and the necessary routine set in motion. What should be the first step here?

There will be need at this particular (and critical) moment of the day's work for the teacher to have ready something in the way of duties or assignments that will keep all of the pupils occupied in work that has real meaning. A quite natural transition from the opening exercises to the detailed work of classification and organization is suggested by the fact that, while the pupils have had an introduction to the teacher, the teacher does not as yet know the names of the pupils. This fact may be explained in a few words; slips of paper—say 3 inches by 6 inches (which the teacher has already prepared)—may be passed to the older pupils, and they may be asked to fill them out according to an outline already written on the blackboard and including the following items:

1. Your name:
2. Date of birth:
3. Name of father (or mother or guardian):
4. Grade finished last:

One should make sure, of course, that pencils are available. If supplies are not furnished by the district, or if a sufficient number of pencils are not found in the teacher's desk or in the supply cabinet, one will do well to purchase a bundle of twelve—and to see that they are sharpened in advance!

While the filling out of these slips will not take long, it will provide occupation for the older pupils while the teacher

(assisted perhaps by one or two of the older children) gets from the younger pupils at least their names, using similar slips and making in each case a note of whether the pupil is a beginner or has attended school before.

When the slips have been collected it will be a good plan to have a roll call in order to begin the important process of associating names and faces (for one should make every effort to know each pupil by name at the earliest possible moment) and to give the pupils a chance to learn one another's names. In calling the roll, each name should be pronounced distinctly. In certain communities there are many foreign-born families, and the pronunciation of surnames is sometimes difficult. It is well to make certain at the outset that one has the proper pronunciation.

In this process of taking the roll, one may readily discover what grades are likely to be represented among the older pupils, and the way will be open for making an initial assignment of work to each of the upper grade groups. Arithmetic offers the best opportunities for such an assignment because textbooks are not necessary and because a pupil's attainments in this subject form the best single standard of classification in all grades beyond the second.

It will be necessary at this point, then, to have ready lists of problems representing the work respectively of the third, fourth, fifth, sixth, and seventh grades. In each case the problems should be a somewhat simple test of the work prescribed for the grade in the latter part of the year, and each list is to be assigned to the group that reports having completed the work of the grade in question. It should be explained that the problems are in no sense an examination, but that the teacher wishes to learn just where to begin the new work for each class. The lists should be relatively short—five or six problems are sufficient—so that it will not involve an unreasonable amount of work to have three or four copies of each list ready in advance. (Two or three copies can be made at one time by the use of carbon paper and not too heavy paper, using a lead pencil, of course, and not ink.) The

problems may be written in advance on the blackboard if there is sufficient space. In many one-teacher schools, unfortunately, the provision of blackboards is not at all generous.¹

With definite work provided for the older groups, the teacher will be in a position to give personal attention to the younger children. These will comprise the beginners and a group who have been in school from a half-year to a year or perhaps two years. For the latter group, seat work of a manipulative character is suggested. Almost every schoolroom where first- and second-grade work is done is now supplied with materials for such seat work as word-building (from letters printed on cardboard squares), sentence-building (from words printed or written on strips of cardboard), color-matching, paper-cutting, and the like. If there is an absolute poverty of such materials, one may be able to buy at a toy shop or stationery store or from a mail-order house two or three sets of the game called anagrams, which is nothing but a collection of letters for word-building; or at a pinch, with cardboard, a pair of scissors, pen and ink, patience, and a little skill in lettering, one could make an abundant supply of materials for word-building and sentence-building (see suggestions, Vol. II, p. 166).

PLANNING FOR THE FIRST LESSON

With this group taken care of by the assignment of seat work, the first real instruction can begin. This, obviously, will be with the beginners; for even if the assignments to the older pupils have been made with reasonable despatch, the little people will probably be getting restive.

And for these beginning pupils, one should never forget that this will be a "red-letter" day. For the older pupils, it

¹ In using the blackboard for assignments that will not be given at once, it is advisable to have some means of covering them until the time when they are used, in order to avoid distraction from other tasks. In some schoolrooms window shades mounted on rollers are employed for this purpose. The assignments are placed on the blackboard before school opens and the shades are drawn down to cover them until the time when they are needed.

is the first day of the school year; for the beginners, it is the first day of the *first* school year. It is something that they have talked about and dreamed about. Whether from their own childish and individual point of view or from the broadest social point of view which comprehends the tremendous significance of universal education to civilization and progress, "starting school" is an event of outstanding importance. The teacher who can meet this situation in a manner that befits its importance deserves the very highest praise (see suggestions for teaching reading to beginners, Vol. II, p. 91).

PLANS FOR THE SECOND-GRADE GROUP

After the beginners have been given their seat work, there should be time remaining before recess for a lesson with the next older group. This may well be a reading lesson, and may take its "cue" from the words or sentences that the pupils have been constructing, each pupil being given an opportunity to test his fellows on one or more of the words or sentences that he has made. This will readily lead to another assignment of seat work; a group of the words and sentences may be written by the teacher on the blackboard, and the pupils may be directed first to construct from letters the words that they did not make for themselves, and then to write the words in script from the printed forms. This assignment, of course, will be completed after the recess.

INITIATING ROUTINE

The signal for recess provides an opportunity for initiating whatever routine may be needed to insure order and despatch in putting away books and materials, passing from the room to the playground, and returning to the day's work. There are varying opinions among teachers and school administrators regarding the degree in which routine should be "mechanized," or made a matter of uniform habit among all of the pupils. Some strenuously oppose anything that even

remotely resembles a "military" organization of the school, such as the formation of lines, the use of the commands, "stand," "turn," "pass," and the like. One occasionally finds schools in which, apparently, perfect freedom reigns supreme, and yet in which there is no semblance of disorder or confusion. More frequently, however, the "free" school tends to be decidedly noisy, disorderly, and often unruly. A teacher beginning work in a new school will do well, we believe, to insure order at the outset and let freedom come only as it has been earned.

This does not mean, however, that the organization of routine need be altogether a matter of arbitrary dictation by the teacher. It is usually a good practice to discuss the problem with the pupils, and to get suggestions from them as to the details that should be taken care of in a uniform way and those that should be left to the choice of the individual. The lesson of order and system is by no means the least important lesson that the school has to teach, and cooperation may well make learning the lesson both easier and more effective.

It is a well established principle of psychology that movements which are to be reduced to the plane of unvarying habit should be made uniform at the earliest possible moment. The routine details of the school organization, then, should be started on the first day, provided that situations involving such details arise. If, for example, it is desirable to have the pupils pass from the room in orderly lines, the way in which this movement is to be made should be explained and exemplified the first time that the lines pass. If a similar formation is to take place at the close of recess when the pupils come back to their work, this should be discussed and explained just before the first recess period.

As a general rule, the teacher should be on the playground during the recess periods, both to supervise the play and to get for himself or herself a little exercise in the fresh air. This practice can easily be begun on the first day if the work has been carefully planned and if no unforeseen contingencies arise to upset the plan.

ASSIGNING SEATS

After recess, a few minutes may profitably be taken to assign seats. There is a distinct advantage in having the regular seats assigned early. If a plat of the room with a square for each seat has been prepared on a sheet of cardboard or heavy paper (at least 8 inches by 12 inches), it will be a simple matter to write in the name of the pupil as each seat is assigned. This plat may then be kept on the desk so that one may find at a glance the name of any pupil. A few references of this sort will enable one to associate names and faces.

LESSONS WITH THE OLDER GROUPS

Assuming that the recess period has ended at 10:45, and that the assignment of seats has been completed by 11:05, there will be fifty-five minutes left before the noon intermission. A few minutes should first be given to the beginners, making sure that seat work is provided for them. The remainder of the time may then be divided among the older groups, beginning with those representing the third grade. All of these older groups, it will be recalled, have been assigned problems in arithmetic as seat work. It will not be necessary, however, to have the first lessons concerned with arithmetic. The problems may be laid aside for the time, and a start may be made with reading (if books are available) in the third- and fourth-grade groups, or with language based on a story.

In the latter case, the third- and fourth-grade groups may be united while the story is told by the teacher and discussed by the pupils. The assignment for seat work may take the form either of handwork or of written work based upon the story (see suggestions for story and language work, Vol. III, p. 157). In a similar way, the fifth and sixth grades may be united for the first geography lesson. The lack of textbooks need not be an insuperable obstacle here. The work

for the year with these two grades, let us assume, will be concerned chiefly with North America. A suggestive "first lesson" on North America (or any other geographical unit) may be given with the aid of a map or a globe, and the assignment for seat work may involve map study (from the wall map), based on questions prepared by the teacher in advance and now written on the blackboard (see suggestions for an introductory lesson on North America in *Intermediate-Grade Geography*, Vol. VIII).

In some one-teacher rural schools there will be no pupils beyond the sixth grade, and in the majority of such schools the number of seventh- and eighth-grade pupils will be relatively small. The important basic subjects of these grades are usually arithmetic, history (including civics), and language (including the elements of grammar). Geography is often a basic seventh-grade subject, but is not likely to be stressed so much in the eighth grade. Because of the need of a sequential organization, such subjects as arithmetic, history, and grammar do not lend themselves readily to a program that involves a combination of grades. It may not be possible, then, before the noon intermission to have an initial lesson in one of the basic subjects for each of these groups. It is probable, too, that the teacher will have enlisted the aid of the older pupils in getting the school organized, so that the serious work for them may well wait until the afternoon session.

ENLISTING THE AID OF OLDER PUPILS

In this connection, it should be pointed out that a temperate use of the older pupils as assistants is often necessary in a one-teacher school, and is not without an important educational value to such pupils. On the first day, particularly, they may well be called upon to place assignments on the blackboard, distribute materials, prepare for the younger pupils lists of textbooks and supplies to be purchased, and even supervise some of the seat work. If possible, pupils in

the first three grades should be dismissed not later than 11:30. Those who live near the school will go home to dinner. Those who have brought their lunches may well be permitted in good weather to play outside; in the latter case, on this first day at least, one of the older pupils should be delegated as a supervisor.

THE NOON INTERMISSION

If a considerable number of pupils remain at the school over the noon intermission it is best for the teacher to remain with them. Increasing numbers of rural schools are making provisions for hot luncheons, and the luncheon period is becoming recognized as an integral part of the school day, presenting opportunities for a very practical sort of training, not only in the arts of housekeeping but in health and in table manners as well (see directions for preparing and supervising hot luncheons, Vol. III, p. 512, Vol. VII, p. 247, and this volume, p. 360). Whether or not the hot luncheon is a feature of the noon period, the supervision of the pupils at this time should be accepted by the teacher as an important duty. To leave twenty or thirty boys and girls of all ages from six to sixteen to their own devices in the schoolroom for an hour each day is simply to invite trouble. Indeed, it is safe to say that more mischief is conceived and executed during these unsupervised "noonings" than in all the other periods combined.

OPENING THE AFTERNOON SESSION

The afternoon session may well be opened by a few minutes of singing, varied occasionally by readings or by a discussion of current events. In contrast with the opening exercises discussed above (see p. 51), the lighter notes may be struck here. Care should be taken not to prolong such exercises unduly, for the school day is all too short for the serious and systematic work that must be undertaken.

In increasing measure as the school year goes on, the pupils themselves should participate in these general exercises—particularly those that introduce the afternoon session.

On the afternoon of the first day, one is still likely to be handicapped by the lack of textbooks and materials. The task of planning assignments that will be anything more than “busy work”—and no assignment should be merely that—will probably be even more difficult than it was in connection with the morning’s program. For the older children, the writing of a letter dealing with the events of the summer vacation is suggested. The letter may be addressed to the teacher or to some friend or perhaps to the pupils of another school with which a “correspondence project” has been arranged (see the discussion of such projects, Vol. II, p. 62, Vol. III, p. 123, and Vol. VI, p. 450).

Seat work should also be on hand for the second-grade group. This may be similar to the work recommended for the morning session, using, however, simple number combinations rather than the word-building or sentence-building.

These assignments for seat work should be carefully prepared in advance so that they may be given in a minimum of time. The first “lesson” of the afternoon should be with the beginners (see suggestions for teaching beginning reading, Vol. II, p. 91).

AFTERNOON WORK FOR OLDER GROUPS

The remaining groups will next have in turn, beginning with the third grade, the arithmetic recitations. Ordinarily, of course, the arithmetic recitation will be a feature of the morning’s program, but the fact that arithmetic lends itself most readily to definite assignments for seat work when textbooks are not available led us to suggest a provisional arrangement for the first day which would postpone the arithmetic recitations to the afternoon session. A few minutes should be spent with each group in going over the problems that were worked in the morning. This will enable one to

determine the justice of the provisional classification, although, except in cases of a very obvious misplacement, it will not be wise to shift pupils to other groups on this first day. The need for drills and reviews will, of course, be apparent, and when the daily program is constructed, a definite period should be set aside for brief "rapid-fire" drills on the "facts" of arithmetic. In this as in other subjects, however, the first day's work should initiate an advance. For each group, then, some *new* work should be planned following the prescriptions of the course of study for the grade in question.

The fact that the mastery of arithmetic must proceed sequentially and systematically will probably make it impossible to combine groups, and one should consequently plan for a "lesson" for each of the grades from the third to the eighth, inclusive. By allowing fifteen minutes for each group, this will take an hour and a half if all of the grades are represented. In planning for each lesson, one should not forget the assignment for the next day's work (see the general discussion of assignments, p. 323). In making these assignments, it may be assumed that the pupils will be supplied with textbooks by the following day. (Detailed suggestions for lessons on the most important arithmetic topics for each grade will be found in Vol. IV, pp. 333 to 403.)

The lessons just discussed will probably take all of the time up to the afternoon recess (which we assume will be from 2:30 to 2:40), together with the time following recess to 3:10. Fifty minutes will still be left before dismissal at 4:00. If possible, the pupils of the first two grades should be dismissed at 2:30, and the pupils of the third grade at 3:00. The time remaining in the afternoon, then, may be devoted to the older groups. For the fourth and fifth grades combined and the sixth and seventh grades combined, language lessons based on the letters that the pupils have been writing are suggested.

If there is an eighth-grade group, the last twenty-five or thirty minutes of the day may be given to a lesson in history. This may take the form of an "assignment" to the first topic

to be taken up in the textbook as prescribed in the course of study. (Note again the general discussion of the assignment on p. 323; note also the specific discussion of the history assignment, Vol. VIII, and the illustrative assignments there given.)

A song is always appropriate as the closing feature of a school day, and at no time more appropriate than on the first school day.

SUMMARY

The detailed suggestions that we have given for the opening day of school are suggestions rather than directions. They have been made fairly definite and concrete in order to illustrate as clearly as possible the general principles that were set forth earlier in the discussion. The essential thing, as we have said, is to get the real work of the school under way with as much despatch and as little confusion as possible. For this reason we have emphasized: (1) the very great value of preparing in advance for the situations that are certain to arise; (2) the importance of having a definite program that will provide a meaningful activity for each group during each successive period; (3) the significance of beginning the teaching of each group with a phase of school work that is basic to the grade in question; and (4) the value of organizing routine on the very first occasion when the need for routine arises.

IV

OTHER SUGGESTIONS FOR THE FIRST DAY

Our principal concern in the preceding section has been with the details of the first day's program. The "right start" will depend in part upon the care with which these details are worked out in advance. But other factors will also play a part in determining whether the first day's work is truly successful. The best plan of action is almost certain to miss its mark if it is carried out in a lifeless, perfunctory fashion.

Some authorities, indeed, condemn such careful and minute preparation as we have recommended, on the ground that it may lead to a formal or "wooden" performance. While this criticism is extreme and on the whole unjustified, it points to a real danger that one should make every effort to counteract. A few suggestions are pertinent in this connection:

1. An important purpose of a definite and detailed program is, through preliminary study and reflection, to insure freedom of mind at the time when forethought must give way to action. Instead of promoting one's freedom, a program may actually enslave one; instead of making an adjustment to the situation easier and more effective, it may make the efforts at adjustment more awkward and confused. In cases of this sort, it is altogether likely that one has lost sight of the purpose of a program. Instead of using it as a servant, one has let it assume the rôle of master; from a useful means to a desirable end, it has itself been transformed into an undesirable end. In all phases of life, we must be on guard against this fatal tendency to mistake means for ends.

2. It is always a wise precaution, when one is not fairly certain about the conditions that will arise, to prepare alternative plans for the more critical situations. Then if the original plan proves to be impracticable, one has a substitute immediately at hand. It always adds to one's comfort and one's confidence to provide what the engineers call a "margin of safety."

3. Quite aside from one's preparation for an important piece of work, a successful outcome is likely to depend in part upon one's physical and mental condition. To give so much energy to preparation that one is physically and mentally exhausted on the eve of performance may be a tribute to one's zeal—but not to one's intelligence.

4. In preparing for work that involves intimate and frequent social contacts, it must be remembered that one will face not a static situation but a situation that is constantly changing. The engineer deals, generally speaking, with stable, material *things*; the teacher deals with unstable, im-

material *minds*. What the engineer *can do with things* determines his success. For the teacher, success is determined by what the *minds* that he deals with *can do for themselves* under his direction. The "properties" of things—their weight, strength, composition, texture, and what not—loom large in the engineer's problem. The teacher's problem centers in something quite different—namely, in the *responses* that his pupils make. Every program for teaching, then, must be subject to confirmation, modification, or rejection in the light of these responses—in the light, not of what *he* does with his pupils, but of what *they* do in response to his teaching.

5. From what has just been said certain important suggestions follow:

a. From the outset, one must be keen to note how pupils respond. If the instruction has "shot over their heads," simplification is in order, and is usually best effected by clear and concrete illustration. If, in an explanation, a step has been missed, the path must be retraced with shorter steps. The skill which will enable one to make these corrections quickly and deftly does not come easily, but from the very beginning one can be on the alert to note where response fails.

b. Response is not always expressed in words or even in overt acts. Far more delicate indeed are the involuntary responses that one can detect in the eyes, in the facial muscles, and in the tenseness or relaxation of posture. There is generally no doubt as to whether a class is attentive or inattentive.

c. Voluntary responses, however, should be encouraged and stimulated from the earliest possible moment. Well-framed questions by the teacher, and answers from the pupils that indicate thought and understanding, are still quite properly regarded as prime tests of good teaching. Very seldom with young children should instruction proceed for any great length of time without asking questions to find whether the pupils are following and understanding. Of large importance, too, are the responses which are expressed by the questions that the pupils themselves ask, either of one another in the course of the recitation or of the teacher.

d. Voluntary responses are not limited to words and sentences. The “acting out” of incidents and events without words is often a valuable means of insuring and testing understanding, and has found an important place in modern methods of teaching in the beginning of reading (see Vol. II, p. 270). Graphic expression through drawing, painting, clay-modeling, and paper-cutting has also a recognized function in primary education (see Vol. IV, p. 3). Among the older groups, the development of “school dramatics,” and the work in sewing, gardening, and manual training have opened up channels of expression that form a valuable supplement to language.

V

FOLLOWING UP THE FIRST DAY'S WORK

As suggested in an earlier section, a “good start” is an important factor in success, but it will not alone solve the problem. Effort must be sustained; gains must be consolidated and extended. There should be no slipping back, no anticlimax. This is one of the reasons why the work undertaken on the opening day should represent the basic work of the school rather than unusual or spectacular “stunts” that one might be tempted to indulge in on the assumption that interest should be caught and enthusiasm stimulated at the outset. Interest and enthusiasm, of course, should be caught and stimulated on the first day—but interest in and enthusiasm for the work of the school, not for extraneous and unrelated activities; and whatever interest and whatever enthusiasm have been generated on the first day should be of a kind that can be capitalized for the efforts of the second day and of all the days that follow.

PREPARING FOR THE SECOND DAY

Some rather definite preparation for the second day's work will be in order, then, if one is to make the most of the first

day's gains; and inasmuch as the teacher is likely to be tired at the close of the first day, it is the part of wisdom to look after as many as possible of the second day's details before the work of the school year begins. For example:

1. In working out the plans for the first lessons in the basic subjects, it will be advantageous to extend the plan in each case to cover the second day's work. Modifications of such plans can then be made in the light of the first day's experiences. It should be noted, however, that reviews of the earlier work are likely to be essential in practically every subject, and in planning for the second day's lessons, one may safely provide for a substantial amount of review.

2. The first day's work has emphasized the basic subjects for each of the grade groups. What we have called the accessory subjects may well be represented in the second day's program, although one should remember that not all of the subjects that are required by the course of study need appear on the program each day; and it is advisable for the first two or three days in any case to concentrate on the basic work.

3. It will doubtless be profitable to organize certain subjects around large "projects," and some of these projects should probably be begun fairly early—perhaps as early as the second day. To handle project teaching successfully requires a high degree of skill, and the inexperienced teacher should not attempt too many or too comprehensive projects at the outset (see suggestions for project organization and project teaching, p. 203 of this volume).

4. The program suggested for the first day was a special program in the sense that the order in which the different phases of the work were taken up was not the order in which they would appear on the permanent time-table. The second day's work, however, should follow so far as possible the daily program that will be used throughout the year. It will be well, then, to study in advance the principles of program making and to have ready a provisional draft. This can then be modified in the light of the first day's experiences and placed upon the blackboard on the morning of the second

day. A great deal more depends upon the construction of the daily program than appears at first glance, as the following discussion will indicate.

THE PURPOSES OF THE DAILY PROGRAM

The first purpose of a time-table is to insure a just *distribution of time* among the various subjects and activities that constitute the work of the school. The requirements laid down in the course of study are not all of equal importance or value; and even where it would be difficult to distinguish degrees of importance, the fact remains that certain subjects can be mastered in less time than others. It cannot be too strongly insisted that *every moment of the school day is precious*, and that time wasted by a poor organization of school work is not only an injustice to the individual child but a loss to society.

It would be impossible if not unwise, however, for the great majority of children to give a maximum of concentration or to do mental work at "top speed" throughout the school day. A second purpose of the time-table, then, is so to arrange the lessons and activities that the energies of the pupils will be expended in the most economical and effective manner through *a proper alternation of mental work, physical work, and play, and through a variation of mental work* in successive periods of recitation and study, "drill" exercises and "thought" exercises, expression through language and expression through manual construction, and the like.

A third purpose that a daily time-table may well discharge is *to serve as an object lesson in the systematic and orderly organization of the day's work*. System and order are unquestionably among the most important conquests of humankind. It is largely because he has learned the lesson of systematic and persistent work that civilized man has been able to rise above the plane of the savage. It is one of the important duties of the school to teach this lesson to each successive generation, and one of the best ways to teach the lesson is to

have system and order exemplified in the organization of school work.

DISTRIBUTION OF TIME IN THE PROGRAM

In the actual construction of the daily time-table, the first problem will be to determine a just and equitable distribution of time among the several subjects and activities. Often these "time allotments" are indicated in the printed course of study, and if definite time allotments have been prescribed, they should be followed by the teacher as closely as possible. If this is not the case, the teacher will find a discussion of the problem in the section of this volume dealing with the curriculum (see p. 25 and especially p. 26). The tables there presented give the percentages of the total time of each school year that may well be given to the several subjects and activities of each grade. Under the ordinary conditions of elementary school organization, the same percentages will hold for the distribution of time in any one week.

COMBINING AND ALTERNATING SUBJECTS

The usual course of study for the elementary school prescribes so many different subjects that it is impossible to have each one appear on the program of each day without reducing to a very few minutes the time to be devoted to each, thus making the work of the day a mere hodgepodge of brief, unrelated exercises. Usually, even in a graded school, it is wise to have certain subjects come only two or three times a week. In the one-teacher school, both alternation of subjects and a combination of grade groups in certain subjects are essential if the daily program is not to be hopelessly congested and the time devoted to each subject reduced to the vanishing point.

As suggested in the earlier discussion, the distinction that we have drawn between basic and accessory subjects will be of service in determining both alternations and combinations.

As a general rule, recitations in the basic subjects should be provided for each day, but the accessory subjects may well come only on alternate days or even only once a week. Sometimes, indeed, it will be possible to have one subject on Mondays and Wednesdays, another at the same period on Tuesdays and Thursdays, and a third at the same hour on Fridays.

The principal considerations that should govern the combination of grade groups in certain of the subjects have already been discussed. As a general rule, such combinations are unjust in subjects that require sequential progress. Combinations are usually out of the question in arithmetic (decimal fractions, for example, must precede percentage, and percentage must precede interest). Combinations are sometimes necessary in history. If possible, however, they should be avoided, for the chronological sequence is important here. In geography and literature, however, certain combinations are feasible. While the intensive study of North America and of the United States should normally precede the intensive study of Europe, one is justified in reversing this order if two grade-groups can thereby be combined. Certainly there is no reason why the study of South America or of Africa should precede rather than follow the study of Europe or of Asia. The seventh- and eighth-grade groups may be combined for literature, and the fifth- and sixth-grade groups as well.

It should be remembered that combining two grade groups always means that one of these groups will have missed a year's work that the other has had. A program of this sort must consequently be kept up once it is started. A fifth-grade group working this year on sixth-grade topics in geography, for example, will have to take the fifth-grade topics next year with next year's fifth-grade group. Unless this is done, this plan of combining groups may mean that a full year's work in the subject will be omitted for some of the groups. This danger may be reduced if it is possible to combine alternate grades (Grade IV and Grade VI, Grade V and Grade VII, for example) instead of successive grades.

(Note the suggestions for classes in geography in the suggested program, p. 75.)

THE PLACEMENT OF SUBJECTS

It is a matter of common belief that certain periods of the day are more favorable for mental work than are other periods. While scientific investigation has not fully confirmed this popular belief, and while there are differences among individuals as to the hours at which they do their best work, certain suggestions may well be followed in the allotment of periods:

1. Wherever possible the subjects basic to each grade should be given the periods generally considered to be the most favorable; that is, the morning periods, especially those preceding the morning recess, and the afternoon periods that follow the afternoon recess.

2. It is probably unwise to have subjects requiring minute muscular adjustments (handwriting, drawing, and the like) immediately after a recess period or immediately after the noon intermission when the pupils are likely to have put forth a great deal of physical exertion in their plays and games.

3. It is well to arrange the daily program in such a way that "form" subjects and "content" subjects will alternate with one another so far as possible. Thus such activities as spelling drills and arithmetic drills should not, as a rule, follow one another immediately.

4. It is also a good plan to have the handwork and other activities involving manipulation so placed in the program that they will afford a change from mental work.

SUGGESTIVE DAILY PROGRAMS

The following programs are printed as merely suggestive of ways in which the numerous problems involved in "budgeting" the time of the school may be solved. It is well-nigh

DAILY PROGRAM FOR A ONE-TEACHER SCHOOL (FOUR-GROUP PLAN)
(Adapted from the Missouri State Course of Study)

BEGIN	TIME IN MIN- UTES	RECITATION PROGRAM	STUDY PROGRAM CLASS D GRADES 1-2	STUDY PROGRAM CLASS C GRADES 3-4	STUDY PROGRAM CLASS B GRADES 5-6	STUDY PROGRAM CLASS A GRADES 7-8
8:50	10	Opening Exercises, Music, All				
9:00	20	A Arithmetic	Reading	Reading	Reading	Arithmetic
9:20	10	D Reading, 1st year	Reading, 2d year	Reading	Reading	Grammar
9:30	10	D Reading, 2d year	Brd. Work, 1st year	Reading	Reading	Grammar
9:40	15	C Reading	Board Work		Reading	Grammar
9:55	15	B Reading	Reading	Arithmetic		Grammar
10:10	20	A Grammar	Play	Arithmetic	Reading	
10:30	10	<i>Recess</i>				
10:40	10	D Reading, 1st year	Reading, 2d year	Arithmetic	Arithmetic	History and Govt.
10:50	10	D Reading and Spelling, 2d year	Brd. Work, 1st year	Arithmetic	Arithmetic	History and Govt.
11:00	12	C Arithmetic, 3d year	Seat Work	Arithmetic, 4th year	Arithmetic	History and Govt.
11:12	13	C Arithmetic, 4th year	Seat Work	Nat. Study, 3d year	Arithmetic	History and Govt.
11:25	20	A History and Government	Reading and Numbers	Nat. Study	Arithmetic	
11:45	15	B Arithmetic	Play	Nat. Study		Agriculture
12:00		<i>Noon</i>				
1:00	5	Music, All				
1:05	12	C Nature Study	Nat. Study		Agriculture	Agriculture
1:17	13	D Nature Study and Numbers		Reading, Language, Spelling	Agriculture	Agriculture
1:30	25	A and B Agriculture	Board Work	Reading, Reading, Language, Spelling		
1:55	20	Writing and Drawing				
2:15	10	<i>Recess</i>				
2:25	15	C Reading, Language, and Spelling	Manual Work		Geography	Geography
2:40	15	A Geography	Manual Work	Manual Work	History	
2:55	15	B History and Geography	Manual Work	Manual Work		Reading and Spelling
3:10	10	D Story Period, 1st year	Language, 2d year	Manual Work	Language and Spell.	Reading and Spelling
3:20	10	D Story Period, 2d year	Language, 1st year	Manual Work	Language and Spell.	Reading and Spelling
3:30	20	A Reading and Spelling	Dismiss or play	Dismiss or play	Language and Spell.	
3:50	10	B Language and Spelling				Arithmetic

impossible to construct a time-table that will be thoroughly consistent with all of the principles and precepts that we have been discussing. Here, as elsewhere in the work of teaching, one can only at best work toward ideals. Adjustments must constantly be made to meet practical needs, where the programs reproduced provide for grade combina-

DAILY PROGRAM (THREE-GROUP PLAN), ROCKFORD ONE-TEACHER SCHOOL,
PULASKI COUNTY, VIRGINIA(From J. E. Avent's *Beginning Teaching*, published by the author
at the University of Tennessee, Knoxville, Tenn.)

TIME	GROUP A GRADES: BEGINNERS AND FIRST GRADE	GROUP B GRADES: 2D, 3D, 4TH	GROUP C GRADES: 5TH, 6TH, 7TH
9:00	School opens	School opens	School opens
9:00 to 9:15	Opening exercises, participated in largely and frequently conducted by the children		
9:15	READING	Study reading lesson for today	Study reading
9:35	Seat work in correlation with today's reading lesson, such as word or sentence building, with cards, writing, etc.	READING	Study reading or arithmetic
9:55	Continuing the foregoing, plus drawing and use of word and letter boxes	Number work or seat work, in correlation with today's reading	READING
10:15	<i>Recess</i>	<i>Recess</i>	<i>Recess</i>
10:30	Seat work in numbers, such as working little combination problems from board, making figures, etc.	Drawing or construction work	ARITHMETIC
11:00	NUMBER WORK	Drawing or construction work	Double period, Mon., Wed., Fri., drawing or construction Tues., Thurs., boys, woodwork; girls, cooking or sewing
11:30	Either copying examples from the board for next day or working examples in connection with today's lesson	NUMBER WORK	
12:00	SUPERVISED LUNCH AND SUPERVISED PLAY for all, 20 minutes each		

tions in the subjects that demand sequential treatment.

It should be noted that most of these programs imply a somewhat larger emphasis upon number work in the first

DAILY PROGRAM, ROCKFORD ONE-TEACHER SCHOOL (Continued)

TIME	GROUP A	GROUP B	GROUP C
12:45	LANGUAGE	Studying spelling	Studying language
1:05	Drawing or construction	LANGUAGE	Studying history
1:25	Drawing or construction	Grades 2 and 3 doing seat work in correlation with language; Grade 4 studying geography	LANGUAGE
1:45	MUSIC or WRITING for all		
2:05	Drawing or writing, or copying, or construction	Grades 2 and 3 doing seat work in correlation with language; Grade 4 studying geography	HISTORY
2:25	RECESS FOR ALL THE CHILDREN		
2:40	Optional or dismissed	SPELLING	Studying spelling
3:00		Grades 2 and 3, optional or dismissed; Grade 4 studying geography	SPELLING
3:20		Grades 4 and 6, GEOGRAPHY	Grades 5 and 7, studying geography
3:40		Grades 4 and 6, optional or dismissed	GEOGRAPHY for Grades 5 and 7

and second grades than is now recommended by most of the students of the curriculum problem.

VI

THE TEACHER AND THE COMMUNITY

No discussion of the opening of school would be complete without some reference to the problems that confront the teacher in adjusting himself or herself to a new community,

PROGRAM FOR A THREE-TEACHER SCHOOL
 For teacher in charge of Grades 1 and 2
 (From J. E. Avent's *Beginning Teaching*)

TIME	GRADE 1	GRADE 2
9:00	OPENING EXERCISES	OPENING EXERCISES
9:15	READING	Reading, seat work
9:35	Seat work	READING
9:55	MUSIC	MUSIC
10:15	RECESS	RECESS
10:30	NUMBER	Study, seat work
10:50	Seat work	NUMBER
11:10	WRITING	WRITING
11:30	LANGUAGE	LANGUAGE
11:50	STORY	STORY
12:00	NOON: SUPERVISED LUNCH, 20 minutes SUPERVISED PLAY, 30 minutes	
12:50	WARNING BELL	
12:55	CHILDREN MARCH IN	
1:00	READING	Reading, seat work
1:20	Seat work	READING
1:40	DRAWING	DRAWING
2:00	SPELLING	Spelling, seat work
2:20	RECESS	RECESS
2:35	Seat work	SPELLING
2:55	OPTIONAL	OPTIONAL
3:15	DISMISSAL	DISMISSAL

for here, as well as in the actual work of teaching, the "right start" has an important bearing upon one's success, and the "wrong start" is likely to raise serious handicaps to success.

PROGRAM FOR A TWO-TEACHER SCHOOL

For the primary teacher in charge of the first four of eight grades
(From J. E. Avent's *Beginning Teaching*)

TIME	GRADE 1	GRADE 2	GRADE 3	GRADE 4
9:00	OPENING	OPENING	OPENING	OPENING
9:15	READING and	Study reading	Study reading	Study reading
	PHONICS			
9:35	Seat work	READING	READING	Study reading
				or arithmetic
9:55	Seat work	Study arith.	Study arith.	READING
10:15	<i>Recess</i>	<i>Recess</i>	<i>Recess</i>	<i>Recess</i>
10:30	READING	Study arith.	Study arith.	Study arith.
10:50	Seat work	ARITH.	ARITH.	Study arith.
				or geography
11:10	Seat work	Seat work	Seat work	ARITH.
11:30	NUMB. WK.	Seat work	Seat work	Study geog.
11:50	MUSIC or	MUSIC or	MUSIC or	MUSIC or
	STORY	STORY	STORY	STORY
12:00	SUPERVISED LUNCH, 20 min.; SUPERVISED PLAY, 30 min.			
12:50	BELL, to close recess			
12:55	THE CHILDREN MARCH IN			
1:00	LANGUAGE	LANGUAGE	Seat work	Study geog.
				or reading
1:20	Seat work	Seat work	Seat work in	GEOGRAPHY
			prep. for lang.	
1:40	WRITING or	WRITING or	WRITING or	WRITING or
	DRAWING	DRAWING	DRAWING	DRAWING
2:00	Seat work	Seat work	LANGUAGE	LANGUAGE
2:20	<i>Recess</i>	<i>Recess</i>	<i>Recess</i>	<i>Recess</i>
2:35	NATURE STUDY FOR ALL FOUR GRADES			
2:55	READING	Study spelling	Study spelling	Study spelling
			or reading	or reading
3:10	DISMISSED	SPELLING	Study spelling	Study spelling
			or reading	or reading
3:25		DISMISSED	SPELLING	SPELLING
3:40			OPTIONAL or	OPTIONAL or
			DISMISSED	DISMISSED
4:00	SCHOOL CLOSES FOR ALL GRADES AND ALL PUPILS			

SECURING BOARD AND ROOM

One should consult with the preceding teacher if possible and also with the superintendent or supervisor regarding

board and room, and one will probably do well to act upon the advice received from these sources. Comfortable quarters are not always easy to find, particularly in the open country districts, and a person who has been accustomed to living in a town or city may find the contrast in the conveniences of living not at all to his or her liking. It is scarcely necessary to say that the last thing to do in such cases is to complain. This does not mean that the teacher rests under a special obligation or duty to make large sacrifices for the privileges of service, or that steps should not be taken to insure comfortable conditions of living for all teachers. It only means that a complaining or critical attitude in all probability will fail to help matters and almost certainly will react against one personally. Agitation for better living conditions is a function of the profession as a whole and of school authorities.

It may be said at this point that efforts are being made in many states and provinces to provide suitable living quarters for teachers, especially in the rural districts. Where the smaller rural schools can be "consolidated" into two-teacher, three-teacher, or four-teacher schools, it is often possible for teachers to live together, and in an increasing number of cases, "teacherages" are being provided near the consolidated schools. In Connecticut, the State Education Department recommends that teachers of one-room schools in adjoining districts arrange to board together at some central point.

GETTING ACQUAINTED WITH PARENTS

Whether the teacher lives within or without the district, an acquaintance with the parents of the pupils will contribute to one's professional success, and the opportunities that arise to meet parents should not pass unheeded.

It is a sound precept of school management that no parent who visits the school even in the most fault-finding mood should be permitted to depart in anger or with the feeling that the teacher has been anything but courteous, considerate, and just. One may well go to very great pains and

effort to explain patiently and clearly why an unjust request cannot be granted or a special privilege conferred. If a real error or oversight on the part of the teacher is the object of complaint, it is by far the best plan to make a due acknowledgment and thank one's informer for the correction.

But occasionally the bullying and browbeating parent—whether male or female—will be encountered, and here of course there should be no cringing; but it is also true that a “soft answer turneth away wrath,” and that impartial justice can be dispensed without meeting arrogance with arrogance. Even a blustering parent who happens to have a position of power and leadership in the community, and who visits the school in an angry mood, does not meet the teacher on an equal footing. The teacher as a teacher has a professional and a legal status, and a consequent measure of authority, which no individual citizen, *as an individual*, has any right either to usurp or to threaten. The teacher can afford, then, to be courteous, patient, impersonal, and above all just, for these virtues are consistent with the office that he holds. To be discourteous, peremptory, unjust, or to descend to personalities—no matter what the provocation may be—is to surrender the authority that goes with the office.

The positive side of the problem is much pleasanter to deal with. Conditions not infrequently make it quite appropriate for a teacher to stop at a pupil's home on the way to or from school, and thus become acquainted with one or both of the parents. It is hardly necessary to say that visits of this sort should be justified by the needs of the particular pupil or of the school as a whole—unless, of course, one has received an invitation to call. While it is advantageous for the teacher to know something of the home life of the pupils, the advantage will be more than counteracted if the wrong motive is attributed to one, or if one is suspected of prying into matters with which one has no concern. After all, the teacher is not a “settlement worker,” nor (in the usual sense of the term) a social “reformer.” The teacher's authority and responsibility are supreme in his or her office *as teacher*, but they

do not extend beyond that particular office.

The truly professional relationships of the teacher, however, are far from narrow, and properly administered they will bring one in contact with individuals and organizations outside of the school. To encourage and stimulate the interest of the public in the work of the school is a professional duty, and one can well afford to take an active part in the work of clubs and societies that are in a position to help the school. The Parent-Teacher Association is such an organization. In rural districts, the Grange and Farm Bureau often have a keen interest in the welfare of the schools. In the larger communities, the women's clubs offer an opportunity for the teacher to make social contacts that are likely to be helpful.

From a strictly professional point of view, then, it is well for the teacher to take part in the social life of the community, and to become personally acquainted especially with the parents of his pupils.

VII

THE TEACHER'S OWN PROGRAM OF WORK

It is not always easy to hold a proper balance between duties and pleasures, or between work and recreation. The importance of participating in the life of the community and the importance of frequent contacts with adult minds should not blind one to the far greater importance of the day's work. Friends and acquaintances may help one to succeed. Social diversions may provide a wholesome change and recreation. In the end, however, there is no substitute for hard work. From the very outset, the teacher will do well to make a program not only for the school hours but for the entire day.

The primary purpose of "budgeting" one's time in this way is to insure adequate preparation for each day of teaching. Generally speaking, evening work is an absolute necessity for the teacher who would do full justice to his or her pupils. The hours up to four o'clock will be occupied with schoolroom duties. The half-hour following the close of school

is a good time to attend to such routine as record-keeping and the preparation of reports; it is not usually a good time to concentrate on the preparation for the following day. From half-past four to six forms an excellent interval for recreation. After the evening meal, however, one may very profitably devote an hour and a half or two hours to planning the lessons of the next day.

DAILY LESSON-PLANNING

Several matters concerned with daily preparation merit at least brief consideration:

1. The importance of making such preparation a matter of unvarying habit cannot be overemphasized, and to this end the practice should begin on the very first day of school.

2. Daily preparation means much more than merely going over the materials that one will teach. It means careful thought as to the best ways of organizing materials. It should mean frequently the detailed planning of lessons. Above all, it should mean a continuous process of *mental growth* on the part of the teacher.

3. The apparent simplicity of many of the elementary-school subjects often leads the young teacher to infer that daily preparation is not important. This is a very serious mistake. In the first place, these subjects are not simple. They seem simple, in part because one associates them with childhood and in part because they are matters of common knowledge in the adult world. One has only to read in this and the accompanying volumes the articles on arithmetic, the beginnings of reading, geography, history, and even spelling and handwriting, to find how much there is even for an adult to learn about the subjects that make up the elementary-school curriculum. In reality, these subjects are not elementary but *elemental* and *fundamental*. They have been made the materials of universal education, not because they are simple, but because they are so important that everyone should have some acquaintance with them.

4. In so far as possible, then, the daily preparation should mean an ever-increasing richness of knowledge for the teacher. One should know vastly more of a subject than one actually teaches to children if what is actually taught is to be well taught. The habit of daily preparation is the surest guarantee against formal, lifeless, perfunctory teaching, for it will do much to insure on the part of the teacher the freshness and interest and enthusiasm which are so thoroughly essential if one is to stimulate real mental growth in one's pupils.

At the outset of our discussion we said that the "right start" was an important factor in determining success in teaching, but we suggested also that the momentum gained by a good beginning must be sustained and if possible increased if the full value of the "right start" is to be realized. Here at the close of the discussion we have emphasized the principle that will help most to sustain and augment the "right start"—namely, the principle of "daily preparation." These two principles may not constitute a complete formula for success in teaching, but one who follows them faithfully is not likely to be disappointed in the results.

SOME HELPFUL BOOKS FOR THE TEACHER

AVENT, JOSEPH E. *Beginning Teaching*. Published by the author, University of Tennessee, Knoxville, Tenn.

EELLS, HARRY L., MOELLER, H. C., and SWAIN, CARL C. *Rural School Management*. New York: Charles Scribner's Sons.

STARK, WILLIAM E. *Problems of Everyday Teaching*. New York City: American Book Co.

STRAYER, GEORGE D., and ENGELHARDT, NICKOLAUS L. *The Classroom Teacher at Work in American Schools*. New York City: American Book Co.

WILKINSON, WILLIAM A. *Rural School Management*. Chicago: Silver, Burdett and Co.

William C. Bagley

THE CLASSIFICATION OF PUPILS



By

VIRGIL E. DICKSON, Ph.D.

Lecturer in Education
University of California

In Cooperation with

LEWIS M. TERMAN, Ph.D.

Head of the Department of Psychology
Stanford University

THE CLASSIFICATION OF PUPILS

HAVE you ever, on the first day of school, looked over your room full of children and wondered how you could manage the classification and instruction? If you have not, then you have never been a real teacher.

If the ability to instruct in reading, arithmetic, language, and the rest of the school subjects were all that were required of you, teaching would be an easy task. But you must teach these subjects to live, temperamental children. These children may be dull, bright, slow, quick, timid, bold, independent, helpless, sad, happy, or they may have a complex mixture of several of these with other traits. Only one thing can you be sure of—that no two of them will respond alike to your instruction. Not only will they respond differently, but they will require very different treatment on your part if you are to interest each one, if you are to get each one to develop according to his needs.

You were taught in your methods courses that a child should be interested in his school work; that he should not waste time by doing over and over what he has already mastered; that he should discover his weak spots and spend his time and efforts in removing his difficulties; that each pupil should be developed in accordance with his needs. Now as you face your class these ideals must be translated into action. You must decide how you will proceed to interest each child,

how you will keep him busy at work that is worth while, how you will discover his weaknesses and strengths. This forces you into measurement and classification. You are always measuring a child when you attempt to form a judgment about him; you are classifying him when you decide what tasks to assign to him and with what group of pupils he should work.

On the very first day of school, and on every day thereafter, you will face the problems of measurement and classification, at least if you have more than one pupil. There are just two possibilities in classification: one is to work alone, the other is to work with another or others. As we look over the world of affairs we see these two tendencies in operation everywhere. All through the ages it has been the same. On the one hand the psychology of the group—the crowd—brings a stimulus and a reaction that cannot possibly be gained when individuals work alone or when responsibility is specifically placed. Such response may be good or it may be bad. On the other hand, we find that those sources of power that blaze new paths of progress in thinking—that push forward invention and science—are tapped by the individual working alone. Both types of reaction—group and individual—are necessary in school life as well as in life at large; both are essential to a well-developed life of any child. How much and when shall we use each?

PURPOSE AND TYPES OF CLASSIFICATION

PURPOSE OF CLASSIFICATION. The twofold purpose behind all school classification is (1) to save the time of the teacher, (2) to have in one group those so nearly alike that their reactions upon one another will be most helpful. The factor of economy of time has demanded increasing attention with the extension of school privileges from the select few to all the children of all the people. As education has become a universal right, the public has found it necessary for financial reasons to group many children under the instruction of one

teacher. The practice of having children of approximately the same age and educational advancement placed together has become general. One teacher has all children during the first school year. Another will take them the second year. Thus the things needed and understood by one are supposedly needed and understood by all and can be given at one time to the entire group. This avoids repetition and saves much of the teacher's time.

On the basis of this philosophy, that children are alike so far as learning is concerned, all have the same textbooks, all are given the same assignments, all recite at once or listen to another recite. Those who understand pass on; those who do not understand fail and will repeat. This practice is a sort of life-saver for the teacher. It is like handling eggs in dozen packages instead of picking up each one separately. Of course, if the teacher has the time after she has heard the classes recite, she can give individual help to the pupil who needs it. Otherwise he must wait and get his instruction with the next group that passes that way.

Such a plan permits the teacher to have a daily program in which she spends twenty minutes on the recitation in reading, twenty minutes on arithmetic, ten minutes on spelling, ten minutes on writing, etc. She changes classes from reading to English, from history to geography, according to the movements of the hands of the clock or at the ringing of a bell. Such a schedule for group recitations and change of subjects is an administrative convenience for dividing the teacher's time. Pedagogically it cannot be justified as a means of developing the ability to learn.

TYPES OF CLASSIFICATION. In every classroom we find opportunities for, and examples of, both individual and group instruction. The chances for individual instruction grow less as the size of the class increases or as the number of groups or grades under one teacher increases. In the one-room country school of the past, with its many pupils of varying ages and capacities, there was much of the individual plan. Each pupil went forward at his own pace, reciting to the school-

master as a check upon his progress, and asking questions when he needed help. Gradually we have changed to a rigid annual or semiannual grading system. The city schools took the lead in this rigid classification. Most of them now follow a semiannual promotion plan, although some have divided the year into quarters or fifths. Rural schools soon caught the same spirit. Pupils must be classified as first-grade, third-grade, sixth-grade, seventh-grade, etc. It is not uncommon to find rural schools of fewer than thirty pupils with all eight grades represented. All pupils are promoted or failed on Friday, the last day of school, at 3:00 P.M.

Now the tendency is shown in many sections of the country to go back to a greater use of the individual plan of instruction. As evidence of this movement we note two illustrations, one known as the Winnetka Plan, the other the Dalton Plan.

THE WINNETKA PLAN. This plan takes its name from a city of about ten thousand inhabitants located near Chicago, Illinois. Here was started in 1919 a plan of individual instruction wherein grading and advancement were dependent on achievement units. The purpose involves the recognition of individual differences and the elimination of such factors as failure, repetition, skipping, and forcing. The curriculum is divided into two parts. One part deals with the knowledges and skills, as reading, arithmetic, writing, and spelling; the other with self-expression, as art, music, dramatization, and every phase of school life which develops social activity and expression.

For the first part of the curriculum the textbooks are individualized. The essential facts are set up in terms of "goals." There are assignment sheets with practice exercises and self-correcting answer sheets. Each child works alone, proceeds at his own rate, and keeps an individual record of his progress. Diagnostic tests reveal his difficulties. Standard tests given by the teachers determine his achievements.

The other half of the school time is given over to group and social activity. This is the time for self-expression. Creative

work is done in artroom and shop, assemblies are held, dramatization developed, field trips taken, and committees are at work performing all sorts of duties that come up in the life of the school. (See also Vol. X, p. 84.)

THE DALTON PLAN. At about the same time that the Winnetka Plan was developing in Illinois, another experiment was undertaken in the high school at Dalton, Massachusetts. This has become generally known as the Dalton Plan or the Laboratory School Plan. The underlying purpose is to give greater freedom to children in their school work. While there is grouping into classes it is mainly for convenience in administration. The class as an instructional unit is largely abandoned. The classroom is a workshop or laboratory with books and materials that will enable each child to pursue his assignments in a practical way. A large amount of responsibility is thrown upon the pupil. Each is given an assignment of work covering the various subjects, with the understanding that he will be ready to take a test as to thoroughness of his work at the end of a specified period—usually of three or four weeks.

Having been given his assignment he may proceed in his own way, getting or giving help where he can, provided he does not interfere with the rights of others. The teacher thus minimizes class instruction and becomes an advisor or consultant for the individual pupil. Each pupil goes forward at his own pace conditioned only by satisfactory attitude and progress. During these “free” hours when pupils are supposed to be in self-directed activity in classroom and laboratory, it is the duty of the teacher to preserve an atmosphere of study, to explain assignments, to give information regarding the use of materials, to give suggestions regarding methods of attack of problems, and, when need arises, to give full explanation of a point and of its relation to the general principle of the subject.¹

The forenoon is given to this free study and laboratory

¹Evelyn Dewey, *The Dalton Laboratory Plan*, p. 75. New York: E. P. Dutton & Co.

work, while the afternoon is devoted to class recitation and group activity similar to that of the traditional school.

The Dalton Plan, or some modification of it, is being tried in many localities. It is advocated for intermediate grades in the elementary school, and for junior and senior high schools, or for pupils from eight to eighteen years of age, for it is considered that a child should be at least eight years old before he can pursue the self-directive activities involved in this system of instruction. (See also Vol. X, p. 85.)

These two experiments—the Winnetka and the Dalton plans—represent the most extreme efforts in the direction of individualizing instruction that have been tried in our public schools. Both recognize, however, that there is an important place for group activity and for classification. The pupil has individual needs that he can best meet by working alone. Pupils have needs as members of society that can develop only through group activity. Class organization both from a social and from an economic viewpoint will remain an essential feature of public education.

THE PRINCIPLE OF CLASSIFICATION. The fundamental principle of classification is that each child shall be placed where he can get the greatest amount of development suited to his needs. In order to place a child according to his needs we must know the nature of differences found in children.

INDIVIDUAL DIFFERENCES

DIFFERENCES IN HEREDITY AND ENVIRONMENT. Differences are of two kinds: One type is due to heredity and comes to the child through his ancestry; the other is the result of environment or training. The influences of heredity and environment are hopelessly mixed in each child's life, but the teacher is wise who seeks to discover which characteristics of a child are easily changeable or removable by training and which are not. General temperament and general intelligence, like the color of the skin, are subject to the laws of heredity and may be only slightly influenced or modified by

the training of a single generation. However, while it may be true that what one *can* do is prescribed at birth, what one *does* depends largely upon environment and circumstances. One duty of the teacher is to help create that environment which will produce the best results in terms of the child's interests and abilities.

DIFFICULTIES OF ADJUSTMENT. While the teacher may find it difficult to adjust her work, difficult to know what to do with children whose dispositions, emotions, and instincts, or even size make them misfits with their fellows, she should realize that the child often suffers even greater difficulties. It is tremendously hard for many a child to face his problems of adjustment. He is sensitive and doesn't know why. He is big and awkward and can't help it. He is dull, although he tries hard. A child's failure or success both in school and in life may easily depend on the emotional attitude that results from his being understood or misunderstood.

Tony was a boy who until he was fifteen years old tried faithfully to do what was asked of him at school. Almost never could he do anything well. Gradually he began to chafe under the impossibilities of his environment. He could not reach even sixth grade attainment. He grew "mean." He turned from devotion to hatred. He hated the school, he hated the teacher, he hated the law that made him attend school. He became a menace to society, clashing with anything that interfered with his desires. It started by his being a misfit in school.

WHAT DIFFERENCES ARE SIGNIFICANT IN CLASSIFICATION? Everywhere in education we find a movement, almost revolutionary, toward the proper recognition of individual differences. The most common type of difference used for classification purposes is that of scholarship. How much has the pupil accomplished or how far has he mastered each subject? Sometimes we need to group children according to sex. This is true in junior-high-school classes for physical training, sewing, cooking, or manual training. Sometimes we use weight as a basis, as in games. At another time we must con-

sider age, or instinct, which is largely a factor of age, or social development, which is a matter of environment and training.

On page 93 is a picture of three boys, each of whom was within a few days of nine years of age when the picture was taken. Henry was normal according to standards of height and weight; Raymond was underweight and short; while Frank was very much overweight and tall, equal in size to the average fourteen-year-old boy. By an age standard these boys would all be ready to enter the fourth grade but they did not work naturally or effectively together in that grade.

Although Frank's powers of accomplishment indicated fourth-grade placement, he did not fit the desks in the room and he looked out of place whether he was sitting or standing in his class. When he talked or sang his voice sounded peculiar, for it had undergone the change common to adolescence. No stretch of imagination is needed to recognize that which was found to be true—the intense strain Frank suffered in his attempts to adjust himself to his environment. When with others of his own age he was a “King Saul,” but without the judgment and leadership commensurate with his size. There was almost equal difficulty when he attempted to adjust himself to a group of his own size, where he was looked upon as a “big child.”

Through the splendid cooperation of parents and school, Frank was kept in a wholesome attitude toward study and social life. For the following three years he was permitted to take some of his work in the shops and laboratories with high-school boys. Much of the regular textbook work of the grades was done under the instruction of his mother at home. When he reached the age of twelve years he was in a regular eighth-grade class doing satisfactory classroom work, and for the first time since he entered school he had almost reached the point where he felt natural in all the activities common to classroom and school life. Within another year his adjustment was complete and he was able to move forward normally and happily with his group. What would be Frank's attitude if he had been forced through a rigid standardized



These three boys are the same age—nine years

system of grades for seven years? No one will ever know. But his case is an outstanding illustration of the need of a flexible school system. The school must adjust to fit the child when the nature of the child is such that he is not adapted to that particular school.

Let us note some of the differences that confront a teacher as she attempts to make classification. I have before me the data for a low-eighth-grade class. In age these pupils range from 11 years 4 months to 19 years 3 months. As measured by a mental test they vary in general learning power (expressed as "mental age") from 8 years 9 months to 16 years 9 months. In height they vary from 52 inches to 69 inches; in weight, from 68 pounds to 157 pounds. They vary in temperament from the high-strung, supersensitive to the phlegmatic and undisturbable; in social interests, from the one who craves continuous crowds, companionship, and stimulation to the one who prefers to be left alone in silence; in interest, from one who wishes to be an actor before the footlights to one who would dig for coal in the heart of the earth; in aptitude, from one who can master the keys of the pipe organ to one whose shuffling gait and clumsy motions can be trained only to work with big tools and coarse materials. All these differences are significant in classification because they have a direct bearing upon how one acts in the group of which he is a part.

METHODS OF INDICATING INDIVIDUAL DIFFERENCES

PAST METHODS. We have always measured school work and indicated individual differences among pupils. The weaknesses of former measuring systems, however, lay in the fact that we had as many measuring sticks as we had teachers and that no two teachers spoke the same language when they used "fair," "good," and "excellent." Numerous studies have been made to show how varied are the marks of different teachers on the same child and on the same examination paper. The same paper in arithmetic, for example, has been marked with percentages varying from 75 to 95 by different teachers. Papers in composition, history, and reading are subject to greater differences of opinion, due to the ideals and training of the teacher who happens to do the

grading. As a matter of fact, a teacher will change her own standard from day to day or from month to month. This is shown by having a teacher regrade a set of papers after a month has elapsed. Frequently a wide difference is found in the two sets of marks.

This fact is more important than might appear at first thought—important to the child, to the teacher, and to the parent. A child who is in the habit of getting A's one year gets C's under a new teacher next year. He may get B in one class and A in another, although he knows he is doing better work in the first class.

Teachers are often compared as to success simply by the number of high or low marks given. The tendency to court popularity by giving high marks is perfectly natural. It is not uncommon for the teacher to incur the hostile attitude of the home and lose the cooperation of both parents and child by giving school marks lower than those customarily given by a previous teacher. This attitude may be entirely independent of the facts relating to the child's scholarship. Lack of uniformity of standard in marking is serious to parents because it arouses a loss of confidence in the accuracy in marking and in the fairness of the school to the child.

NECESSITY FOR MORE ACCURATE STANDARDS. When the writer was a lad it was customary to hear from travelers, "How far is it to Unionville?" and the response, "About two hours from here." At the present time such a measurement of distance would be very ambiguous. One would need to know whether the traveler walked, rode a horse, or went by automobile, train, or airplane, as well as something of the make and mechanical condition of each of the three last-named means of conveyance.

In the educational field, to say that a pupil is "fair," "good," or "excellent," without having some basis for impersonal checking is very much like saying "Unionville is about two hours from here." We have a more accurate means of expressing accomplishment in different school subjects by the use of standard measurements.

MEANS OF DISCOVERING INDIVIDUAL DIFFERENCES:

1. *Observation.* Every teacher has at her disposal the use of the observation method which has been common to past generations. She can be accurate as to differences in age, height, and weight. She can also form fair judgments as to health, childishness or physical maturity, general brightness or dullness. She can observe temperaments and interests and aptitudes. If the pupil has been in school before, she usually has some cumulative data showing scholarship, deportment, and progress through school. And last, but by no means least, she usually can find out a great deal by knowing about other members of the family, not only what they are like but also what they are interested in and what they have done. Too often the teacher does not obtain that help which comes from knowing the child's family and his home environment.

2. *Approximation through tests.* If the teacher is willing to fit herself to do so, she may determine differences in accomplishment in the various school subjects more accurately than by general observation. She may do this by means of rough tests of her own making or, better, by means of some of the standard tests, even though she has had no training in the use of these tests. Any teacher should be able to approximate a child's grade placement in reading, arithmetic, writing, spelling, or language usage, by a brief try-out with such tests as are shown in Volumes II and VI of *THE CLASSROOM TEACHER*.¹

3. *Scientific use of standard tests.* The standard test is a device or tool made to assist the teacher in making more accurate measurement and more accurate statements as to differences. The chief purpose of a standard test is to help the teacher know her children better. She should not fear that such tests will be used as a basis for criticism of her work but should welcome them as a means of self-improvement. Properly used, they will always make her a better teacher. Standard tests are not a fad or frill in education.

¹See *Tests and Classification in the Primary Grades*, Vol. II, and *Classification of Pupils in the Intermediate Grades*, Vol. VI.

They have come to stay. No teacher can afford to remain ignorant of the help they can give her in her work. At the same time she cannot afford to attempt any extensive use of them without training. An X-ray is a perfectly good machine for certain purposes but used by an unwitting novice it may produce frightful burns.

THE USE OF STANDARD TESTS

In addition, then, to the observations and personal judgments that are commonly made, the teacher who has a knowledge of educational measurement has an important basis for the comparative study of her children. Standard tests give her data that are impersonal. They enable her to compare a child's performance with that which is normal to other children of his age or grade. It makes no difference whether she or any other teacher thinks this child is "good" or "excellent" or "fair" in arithmetic, the standard test will reveal what he can do with specific material selected as standard for his age or grade. In arithmetic, for example, he is given a set of problems under conditions which are as nearly as possible identical with those confronting others who have taken the test. These conditions involve instruction, timing, scoring, and all other factors that may affect his work. So when we say a pupil has made a score of 25 on the Woody-McCall Arithmetic Test, or that his reading age is twelve years on the Stanford Achievement Test, we are using a language which can be understood by any teacher in any city school or country school. We have refined our speech. There is clearer understanding among pupils, teachers, and parents. We have opened an avenue which helps to make more accurate thinking and to inspire greater confidence.

For example, Lucy was a timid, retiring girl of seven years who had one year in first grade and had done satisfactory work under a teacher who had studied and understood her sensitiveness. Her first experience with the new second-grade teacher came with a request to stand and read a certain pas-

sage. She did not have the right page, which caused a delay. "Sit down," said the teacher, "we like to have boys and girls in this class who will pay attention and keep the place." The timid spirit of the girl was thrown into a chaos of confusion. She suffered such a disturbance that when called on again to read she stood but simply could not pronounce the words which under normal conditions she knew perfectly well. For days afterward she was unable to muster the courage to attempt to recite. She had to be forced to go to school each morning. The teacher, unable to get a satisfactory recitation, demoted her to the next lower grade.

You may say that this is an extreme case. It is; yet there are literally hundreds of children in our schools each year who are the victims of just as great injustice as this, resulting from personal "snap" judgment. If Lucy's teacher had used standard tests as a check upon her own opinion she would have discovered that the child had the ability to do the work of the grade, while further observation would easily have led her to the cause of the child's difficulty, which was nothing but timidity. Scientific measurements will thus reduce the tendency on the part of teachers to make snap judgments.

WHAT DO THE RESULTS OF A STANDARD TEST SIGNIFY?

1. *Grade norms.* The result of any child's efforts on a standard test properly administered can readily be compared with those of hundreds or thousands of other children who have taken the same test. It is easy for any teacher to understand the general significance of a statement that Mary's score is in the lowest 10 per cent and that Edward's score is in the highest 10 per cent, and that Henry's is at the average of thousands of children of the sixth grade who have taken the test in many school systems. She also knows what it means when we say that John has reached only fourth-grade standard while William has exceeded that of the seventh grade. This is making use of what is called a grade norm or standard. It is based upon the performance of large numbers of children selected so as to represent as nearly as possible what is common to that grade in public-school work.

2. *Age norms.* In another test the teacher may find that Susie's score in reading is that which is normal or average to ten-year-old children, and that Jim's score is equal to that which is normal to eight-year-old children. Here she has used what is called an age norm (standard). The teacher who has prepared herself to use standard tests has at her command the assistance of the best experts of the country in studying the strengths and weaknesses of her pupils. It matters not whether she teaches in the city or in the country, in the East, West, North, or South, or in a foreign country; she can use a language that can be understood and correctly interpreted by teachers anywhere who are likewise prepared.

CAUTIONS AND DANGERS. There are two very great dangers that should be pointed out to all teachers and administrators who use tests: The first is overuse of tests; the second is overconfidence in the results.

Overuse of tests. This will cause teaching to become too mechanical. The largest number of tests and those most easily used relate to the mechanical or drill phases of the subjects, such as the four fundamental processes in arithmetic, accuracy and speed in writing, speed and comprehension in reading, accuracy in spelling, etc. The spirit in modern education emphasizes the values that come from feeling and appreciation, from judgment and reasoning. These do not grow out of drill work, but are best developed by such methods as the project or the socialized recitation. Character and attitude cannot be measured by the standard tests of subject-matter that are common today. The teacher who uses standard tests too much and makes them her sole guide is likely to become a drillmaster. A good standard test in each subject, thoughtfully used once a semester, or, better still, once a year (if the teacher has the child for the entire year), is enough under average conditions. Under special conditions and special supervision more frequent use of standard tests may be helpful in studying progress or method.

I am not referring to informal tests or checks of her own making which a teacher uses to discover the progress of

pupils or to analyze their problems. These should be a part of the daily or weekly program of every teacher.¹

Another danger from overuse of tests arises out of the too common practice of giving standard tests and stacking the results away where they are never used. Thousands of children have been tested only to have the test booklets scored and shelved. Neither teachers nor children ever heard of them afterward.

It may sometimes be excusable in researches or surveys for tests to be given and no results returned to teachers. But many a school official has given tests because it was the popular thing to do or because he became inspired with a new idea, only to find later that he did not have time or energy to see that the teachers had the results for classroom use. Generally a test has lost its usefulness unless the teacher has the results for her own study and guidance within a very few days after the test is given. If this rule cannot be followed, time and money spent in testing will be wasted.

Overconfidence in results. Too much faith in test results may be damaging in several ways. The most dangerous tendency and the one to be most severely condemned is that of taking a low mental test as final proof that a child is dull and making the classification on this finding alone. The only safe attitude for a teacher to take regarding a standard test, whether it be a mental test or a test of accomplishment in subject-matter, is that the result for every child must be checked by every other means known to the teacher. How does it compare with her own estimate based upon daily work, with other test data, with age, with effort, health, and emotional attitude? If the corroboration is not complete, it is imperative that further observation and further study be made.

Another tendency is for the teacher to place too much trust in the test norm or standard as the final or desirable goal to be reached by the class. In the first place, such a

¹For an excellent discussion of the use of aids in checking reading by informal tests, see the departments on Reading, Vol. II and Vol. VI.

norm is based upon general or *current* practice. It may or may not be *correct* practice. A change in methods, textbooks, or educational ideals may completely change the norm in a few months or a few years. The fact that a majority do thus or so does not necessarily make that thing either right or best. All improvements in education have in the beginning been represented by a very small minority. However, the most widely used tests may be taken as representing the best thought and the best practice of the time.

Furthermore, a norm is not the satisfactory goal for all pupils. Individual differences in interests and capacities demand that we consider each child and *his* needs. The norm is the position or meridian by which we measure the amount or extent to which he varies from the standard performance or practice. It should be remembered that approximately 50 per cent of the children involved in obtaining this norm reached upward into higher levels of performance in gradually diminishing numbers, and that 50 per cent likewise reached downward to lower levels. Reason and judgment, with the child's complete history in mind, must determine what variation is the desirable and proper one for that child. The need of one may require that he greatly exceed the norm, while for another it would be a waste of his own and others' time to attempt even to reach the standard.

RECORDS TO BE KEPT¹

A cumulative record of each child's ability, accomplishment, and characteristics of strength and weakness will do much to remove the effects of personal prejudice, haste, inefficiency, and mistaken judgment of the teacher or of others who deal with him. Scientific treatment of any child demands that impersonal observations not only shall be carefully made but also shall be accurately recorded. Such record cards are now in use in many good school systems and should

¹See also *Routine and Record Factors in Classroom Management*, p. 173, for information concerning record keeping.

Form 20		BERKELEY PUBLIC SCHOOLS ELEMENTARY GRADES												7. Is English spoken in home? <u>Yes</u>		
1. Date of Starting Card														8. What language is spoken other than English?		
2. Born <u>Aug. 13, 16</u> at <u>Seattle</u>		Report of <u>William Bowers</u>												9. Occupation of Father <u>Engineer</u>		
3. Father's Birthplace <u>Canada</u>														10. Occupation of Mother, outside of home		
4. Naturalized <u>Yes</u>		MEANING OF MARKS A Above Average B Average C Below Average D Unsatisfactory E Failure														
5. Mother's Birthplace <u>Berkeley</u>														11. No. Brothers <u>2</u> Sisters <u>0</u>		
6. Naturalized																
Age	yr.	mo.	yr.	mo.	yr.	mo.	yr.	mo.	yr.	mo.	yr.	mo.	yr.	mo.	yr.	mo.
School																
Teacher																
YEAR	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16
	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av	1 2 3 Av
School Days																
Days Present																
Days Absent																
Times Tardy																
Department																
Neatness of Work																
Application																
Reading																
Phonics																
Penmanship																
Spelling																
Arithmetic																
Language																
Composition																
Geography																
History																
Music																
Drawing																
Science																
Manual Training																
Sewing																
Cooking																
Physical Training																

FIG. 1. This card shows the cumulative record of a pupil in the elementary school. The back of the card contains a chart for the junior-high-school grades

be universally used. A cumulative record should be started when the child enters school, and should follow him as long as he stays in school. It becomes increasingly valuable as a check for guidance and placement as a child proceeds through the junior high school and the high school.

Some states are providing cumulative record and report cards that are to follow the child whenever he transfers. In states where no common card is used, any teacher should be able to secure valuable samples or advice from the office of the state superintendent. Fig. 1, above, and Fig. 2, page 103, illustrate the types of card used for cumulative records in some schools.

The record card shown in Fig. 1, which shows the cumulative record of a pupil in the elementary school, is read thus: William Bowers entered the low-third grade of the Whittier

School when he was nine years old. His scholarship in reading was C +, B, and B for the three report periods, respectively, and B for the average of the first term, etc.

On the reverse side of the card will appear his record for

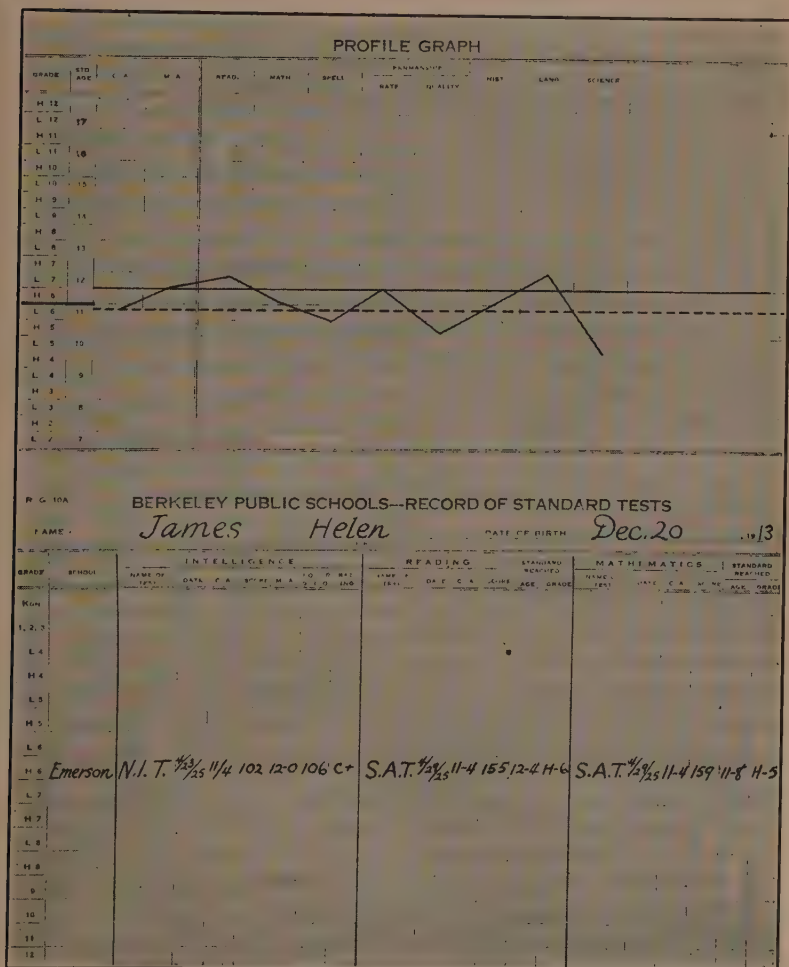


FIG. 2. This is a cumulative record card for standard tests given from kindergarten through high school. The upper half of the card shows a profile of the results of the tests

the junior high school. The card follows the child wherever he goes in the school system. When he reaches the high school it is placed in the file with other cumulative data and a new record card is started. This card, together with the test data card shown in Fig. 2, is of great assistance in the counseling and guidance program of a school.

Fig. 2 shows a cumulative record card for standard tests given from the kindergarten through high school. It should be read thus: Helen James, while in the high-sixth grade, took the National Intelligence Test on April 23, 1925. Her age was 11-4, score 102, mental age 12-0, intelligence quotient 106, which is translated into a rating of C+ (slightly above average) on the seven-point rating scale. On April 29, 1925, she took the Stanford Achievement Test. In reading she earned a score of 155, which is interpreted as standard for age 12-4 and high-sixth grade. In arithmetic she earned a score of 159, which is interpreted as standard for age 11-8 and high-fifth grade. The reverse side of the card contains the rest of the test records.

The graph on the upper half of the card shows a profile of the results of all these tests. The two parallel heavy lines across the card represent the pupil's chronological and mental age levels, respectively. A mere glance at this graph reveals how accomplishment in each subject test compares with mental ability, as indicated by a mental test (see heavy horizontal line); also how accomplishment in each of these tests compares with her chronological age (see dotted line) and grade placement.

ADJUSTMENTS OF INDIVIDUAL DIFFERENCES

Let us suppose that we have discovered the individual differences, that we have made careful observations and tests, and have our records and our pupils confronting us. Action is demanded. How shall we classify? When shall we promote and when fail a child? What are the general policies to guide us? These are questions that face every teacher. She has a

right to the clearest answers possible. We shall attempt to give such answers first regarding general policies and then by means of specific illustrations.

GENERAL POLICIES REGARDING CLASSIFICATION AND INSTRUCTION:

1. Place a child in that group where the work will contribute most to his own development. Should such placement interfere with the welfare of others, the total good, as nearly as possible, should be the deciding factor.

2. Modify the form of assignment, the method of instruction, the content of the subject-matter, or all, to fit the capacity and needs of the child. (This may likewise refer to a group of children.) These policies involve all the problems of promotion, grading or ability grouping, individual instruction, project method, socialized recitation, special classes, modifications of the course of study as to enrichment, elimination or simplification, variation in assignment and requirement, and elective subjects or elective courses.

EQUALITY VERSUS IDENTITY OF TREATMENT. One of the first questions that confronts every teacher facing these problems is: "Shall I treat all children alike and attempt to give identical training to all?" My answer would be a most emphatic "No." It is as completely undesirable as it is utterly impossible to do so. When no two children of a group are alike in their abilities or interests, it is manifestly unfair to attempt to give them identical treatment. If equal time and equal effort should be given to each child in the group that confronts you today, no matter what grade you teach, the individual differences in the group would nevertheless grow greater month by month. The most capable and most interested children will profit most for each unit of instruction, and thus the gap of difference will gradually widen. This is but natural, and oftentimes just as it should be. It would be a gray, monotonous world if we all looked alike, acted alike, wanted the same things, and did things in the same way. Variety is not only the spice of life, but it is necessary to life in all civic, social, and industrial groups.

While it is true that some differences should be ironed out, others cannot be, and some should deliberately be made greater from the very first. The teacher should constantly be on the alert to find out how thus to apply her efforts. For example, all children should know something of reading, of writing, numbers, and music, but we should not attempt to make them all fit the same mold of accuracy or even of appreciation and understanding. Life will not make similar demands, even in these common school branches. Justice demands that their instruction shall allow for variation of requirement from the very first grade up. Overstandardization dulls initiative and destroys originality, kills the interest and idealism of the specialist or the genius, and tends to reduce his effort to a monotonous rhythm of averages.

ABILITY GROUPING. Unless plans of individual instruction develop with marvelous strides, most of the teachers who read these pages will be compelled to teach children in grades or groups, whether they like the plan or not. They will have first grade or fourth grade or sixth grade, or a combination embracing possibly from one to six or eight grades; or they may have classes in junior high school in English, general science, or history. In any event, no teacher will have a group that is strictly homogeneous. The individual differences in powers and needs will usually be great, whether one grade or several grades are involved. Although we may find it necessary to teach in groups, we must keep constantly alert to the demands arising from the existence of individual differences.

VARIATIONS IN TREATMENT OF COURSE OF STUDY AND ASSIGNMENTS. Most teachers at the beginning of a new term face a group of children who have been trained by another teacher. As much information as possible regarding each child should be gained from the former teacher or her records. Remember that the children now face a new personality. Many of them may react differently to different teachers. Now begins the task of studying individual characteristics, individual abilities, individual needs, and of making adjust-

ments accordingly. Opportunities for variation and adjustment will come largely through treatment of the course of study and assignments. The capable child will need an enriched curriculum, as well as higher standards of accuracy. The dull or slow child may require less work, or simpler work, more time, or all of these. Such variation in assignment and requirement can be managed by any teacher by the use of the project method, socialized recitation, informal tests, and lesson helps as described in other departments of these volumes.

Special classes. Many city schools, and some states, have adopted a plan of special classes and special segregation of pupils according to ability. There are A, B, and C classes, or X, Y, and Z classes, one being for the children who are brightest and able to do the most, one for the slow or dull, and the third for those who are able to do average work. There are still other special classes for the mental defectives or the feeble-minded, for the blind, the deaf, the crippled, or those with speech defects. All of these help to simplify the problems of teachers by placing outstanding cases under the direction of specialists. The teacher who has a child in need of special classification of a kind not provided for in her own school should always bring the matter to the attention of the proper authorities in the city or state. Many a handicapped child has been helped into a life of happiness and usefulness through the training obtained in such classes.

The fact remains, however, that every teacher, whether in a system where special classes are provided or not, will continue to have wide ranges of individual differences whenever she confronts a group of children, and she must be prepared to adjust her work and her methods to meet individual needs if her teaching conforms to the modern conception of education. Sometimes I meet the attitude of "What is the use? We test and study to find individual differences. We find causes and needs and then when a child is a misfit in our grade there is no place to send him." My only answer to this attitude is that while we may be unable to solve the child's

problem by sending him away to another teacher, yet the better the teacher knows the child the better she is able to instruct him if he remains with her.

"Skipping" and irregular promotions. The irregular promotion or placement of a child causes the teacher to face two possible difficulties. One is the personal and social feeling aroused in the child or among his fellows, the other is the possible effect on the child's later scholarship. It is important, so far as the habits of the child are concerned, to keep him working up to his capacity, whether that capacity is high or low. The capable child to whom we may look for marked achievement should certainly build broad foundations in the elementary school and the junior high school. He should not only do enriched and accurate work in his regular subjects but when conditions permit he should also take additional subjects, such as language, music, art, science, literature, or history. In addition, he should be able, if his health is good, to complete his elementary and secondary training in less than the standard time set for the progress of the average child.

The rate of his progress should be governed by his mental powers to grasp his subjects, by his health, and by his social and physical adaptability to the group with which he must work. A child who is underage, who is physically small, and whose instincts and social development make him a misfit with the rest of his class may easily lose much that is valuable for social habit formation by proceeding too rapidly. His social education may be of greater value to his later life than the saving of a year or two of time in completing his high-school or college course.

On the other hand, the child who is large and healthy, and socially well adjusted, may move up easily with children one or two or even three years above his own age. Seldom does a child fit in with his group if he is more than two years underage for the grade in which he is working. Likewise the child who is more than two years overage for his grade will probably be just as serious a misfit unless he is small and immature.

Symmetrical development for character and citizenship demands that every child shall have a reasonable number of easy and of difficult tasks in his daily life. Let us consider the child who is scheduled for an extra promotion. A short time ago Vincent was "skipped" from the low-fifth to the low-sixth grade. Now, Vincent was a bright nine-year-old boy with intellectual and prominent (neighbors say self-seeking, egotistical) parents. The teacher in the low-fifth grade naturally found many occasions when Vincent's work was superior to that of any of the rest of the class. This was well, but she should also have made some occasions wherein he would face difficulty or defeat, even if she had to set a special task or have him work against his own record.

Before three months had passed in the low-sixth grade, Vincent's new teacher was (foolishly, I think) holding him up as one of the best in her class. Thus an unhealthy arrogance was being intensified in the boy and in his parents. At the same time a resentful, unkindly attitude was growing among his classmates and in the community. This unfortunate and entirely unnecessary situation caused friction in the little town and made the work of both teachers unpleasant. The boy could have been given his deserved promotion and the unpleasantness could have been avoided if the teachers had seen to it that both he and his fellows regularly secured a reasonable amount of praise and criticism, of success and failure.

This is but one of the innumerable situations facing the teacher in which she must use insight and judgment as well as the most scientific and reliable data at her disposal. Every teacher who desires to keep abreast with the progress of her profession will equip herself with the best tools available for discovering individual differences and their causes. All methods of instruction and all schemes of classification are intimately tied up with this one central problem of the school-room. We can no longer evade it; we can no longer avoid the responsibility of recognizing each child as an individual, of studying his every ability and disability, and of adjusting

the curriculum to meet his needs. The teacher who goes about this conscientiously and scientifically will take increasing joy in her profession as her understanding of children grows and as she sees her skill increasing—sees that hers is the task of the artist to draw out the color in each life, to shade here and to brighten there, and to blend all into one harmonious whole that will fit best its own environment.

Virgil E. Dickson

Lewis M. Terman

CLASSROOM CONTROL



By

CORINNE A. SEEDS, A.M.

Principal of the Training School
Assistant Supervisor of Training
University of California, Southern Branch

In Cooperation with

MILO B. HILLEGAS, Ph.D., LL.D.

Professor of Education
Teachers College, Columbia University

CLASSROOM CONTROL

METHODS OF CONTROL

THE problem of classroom control is most vital and of outstanding, far-reaching importance. The future welfare of our country depends largely upon the methods of control used upon its future citizens. By these very methods teachers can produce anything from slaves who obey their masters explicitly without thinking, to freemen who make their choices only after careful deliberation and discussion. Thus it is of the utmost importance that teachers should know what types of control are best for the future welfare of a democracy.

Our democracy is composed of a conglomerate mass of individuals at all stages of ethical development, from those who obey the laws made by the group for the welfare of all only when they are forced to do so to those unselfish souls who realize that their highest development and happiness are reached only as they consider all and act according to the best interests of the whole group. Midway between these two extremes we find those who obey only because they have been trained to do so, some who conform because of fear of the disapproval of their fellow men, and still others who act in accord because they long for approbation.

Taking into consideration all of these classes of people with such different attitudes toward control, it would be folly to assume that one method of control, even the ideal, would prove sufficient to promote the best interests of the

group. There should be as many types of control as there are attitudes toward it. While it is necessary at times to use the lower forms of control, yet it should be the hope of the democracy that in the dim distant future, through our methods of education, the ideal can be truly reached—"a government of the people, by the people, and for the people."

The problem of control which the classroom teacher must meet is a miniature of the greater problem which confronts the democracy. It is not easy for the teacher to know how to manage Mexican Pedro, whose father digs in the street, Isidore, the son of the Rabbi, Mary Evelyn, whose mother is president of the philosophical society, and forty others who differ more or less in native and acquired characteristics, so that they may live richly and cooperatively together in their school community and grow into better, happier boys and girls. Like the democracy she should be cognizant of the fact that the highest control is that which comes from within as a result of reason, and she should strive toward that as her ideal. But she should not be utterly crushed if at times she has to resort to coercion in order to promote the greatest good for the greatest number.

In order to meet the control problems found in the typical American classrooms, teachers use methods based upon the following general types or combinations of two or more types:

- | | | |
|-----|-----|---|
| | (4) | Unselfish self-control, wherein each person considers the good of the whole |
| | (3) | Group control, wherein rules are made and enforced by the group working together for a common purpose |
| | (2) | Teacher control, wherein rules are made and enforced by the teacher |
| (1) | | No control, wherein the children all do as they please |

NO CONTROL

EXAMPLE:

The teacher is attempting to carry on a class recitation with one group of children while the others are supposed to be studying. Two or three large boys are lying on the floor with their feet propped against the stove. They are reading fiction which does not contribute in any way to their assignment. They later show a lack of knowledge as to the lesson content. Several girls are holding an animated conversation about the ways of securing pictures of their favorite "movie" actresses. The children who are trying to study have to dodge continual volleys of chalk, paper-wads, and even an eraser now and then. A note of unsavory character is passed about among the older children who laugh heartily at its contents.

The room is in an uproar; the recitation is a complete failure; but the teacher smilingly assures the visitor that she believes in "freedom."

DISCUSSION:

There can be no defense for such lack of control, even when masquerading under cover of the term "freedom." The teacher might as well not be there at all. The result of no control is always chaos; children are denied the right to feel happiness in real achievement; habits and attitudes are formed during these years in the schoolroom which may tend to make of them, in later life, unreasoning, selfish, and lawless citizens.

Perhaps it might be well to state that true freedom would not allow such an infringement upon the rights and liberties of others. True freedom is something which should be earned and bestowed only upon those who can use it wisely. All teachers should be very careful to distinguish between real freedom and merely allowing children to do as they please. Real freedom leads toward right and toward true happiness; while allowing children to do as they please leads toward wrong and toward future sorrow.

ABSOLUTE TEACHER CONTROL

EXAMPLE:

When the class assembles on the first day of school, the teacher firmly informs the children that *they* are there for business and that *she* is there to see that they attend to this business of learning. In order to accomplish this, certain tasks must be finished each day before they leave school. Anything which interferes with the work of school, such as talking without permission, whispering, giggling, or writing notes to one another will be carefully noted and punished by the teacher.

Ever after the children study the lessons assigned by the teacher, answer her questions, and accept the punishment she doles out for misdemeanors and errors. They usually do no more than they are asked, and frequently they misbehave when the teacher is not looking.

The teacher's life is one of constant watchfulness. Her profession is not teaching; it is policing. She must be continually alert to catch the law-breakers, fair enough to pronounce just punishment, and persevering enough to see that punishment once pronounced is executed.

DISCUSSION:

Such a method of control is far preferable to the preceding no-control type and should be used, especially by the inexperienced teacher, until she can determine the type best suited to her class of children. If used by a teacher who is always just and fair, the class achievement is usually good and the children rather happy. If, perchance, the teacher is a benign tyrant, the children will often vote this type of control the best of all, because, like many adults, some children dislike sharing responsibility and making choices.

Under this system the children usually do the right thing, not because they know it is the right or why it is right, but because they are trained to obey blindly. The great danger here lies in the fact that they may form habits of following blindly, and later may unthinkingly follow unworthy leaders.

No teacher should be content to use this type continually unless she is handling groups, who, because of limited capacities, will always be obliged to "follow a leader." As soon as possible each group of children should be given a share of the responsibility for its own mental and moral achievement. The teacher should covet the position of guide and adviser rather than one of policeman.

GROUP CONTROL

EXAMPLE 1:

Lawrence was a newcomer into a room which was having competitive arithmetic contests between two of its groups. It soon developed that he didn't know his multiplication tables and for this reason caused his group to lose repeatedly. After one of these losses due to the child's lack of knowledge, the members of his group held an indignation meeting and made it very clear to Lawrence that he must learn his tables. Evidently he failed to take this lack of arithmetical learning seriously, so one day not long after, upon hearing a commotion in the yard, the teacher hurried out where she perceived all of group two lined up in two rows about three feet apart. Lawrence was proceeding down the line, pausing before each member, who shouted a multiplication combination at him. If he failed to give the correct answer he was given a stinging slap and was turned over to the opposite member.

This was a perfectly organized group activity which obtained excellent results, although conducted on a plane too coercive to be encouraged.

The same group were very proud of the compliments they had received upon their good lines and marching. Because a new pupil insisted upon performing gymnastics while in line, a delegation asked the teacher if they hadn't better speak to the offender about his conduct. When he found that he was unpopular with the group, he refrained from further self-expression of the kind.

EXAMPLE 2:

The children of an up-to-date school had a self-government or citizenship club of which they were immensely proud. It met each Friday morning, and with due solemnity its police officers reported any pupils who had broken, during the week, any of the laws the club had felt necessary to make for the good of society. Usually the meetings proceeded smoothly, the law-breakers taking their penalties meekly. But one morning an indignant fourth-grade boy arose and said, "Miss President, I don't think it is fair for Daise to report me when John did the very same thing and she didn't report him." The president asked Daise if John had committed the same offense and Daise said that he had, and burst into tears.

The teacher then asked why she hadn't reported him. Daise was sobbing too much to talk, but the indignant lad and a dozen others could tell. John had given Daise a branch of Japanese cherry blossoms to bribe her not to report him. Before the investigation was over it developed that eight-year-old Daise had become richer by a box of raisins, two candied cherries, and a chocolate bar—all for not doing her duty.

The class and teacher discussed the dishonesty of the act. The teacher asked them if they knew what happened to grown folks who accepted bribes for not telling the truth. Since they didn't, she told them that sometimes they were put in jail and always their offices were taken away from them.

She then asked what they should do in this case. They decided that another "officer" should be elected in place of Daise and that the boys who did the bribing would have to stay a whole hour after school. The boy who gave her the box of raisins said that since they were told on, he thought Daise should have to give back the things she had been given. Daise sobbingly told them that she'd eaten all the bribes "except the cherry blossoms and they were all withered," so she couldn't give them back. The teacher assured the boys that their loss was a part of their punishment for not being good sportsmen.

Because Daise was not really a naughty child the teacher saw to it that she was elected to her former position again, in which office she demonstrated her avowed intentions to "go straight" forevermore.

DISCUSSION:

Group control tends toward democracy and therefore may suffer some of its ills. The results of such control are good or bad depending upon the composition of the group. At least, it places control upon the basis of choosing to do right because of the desire to please the group, and at times mounts to the height of a class decision reached after deliberation and discussion.

UNSELFISH SELF-CONTROL

EXAMPLE:

A certain group of super-bright children were to give a pageant which they had planned. Most of the boys wished to take the part of Caesar, but instead of quarreling about it they decided to find out what qualifications a person should have to enact the part well. After considerable discussion the boy who could best fit the part was chosen by the group. That each boy was entirely satisfied to sacrifice his desire for the good of the whole was shown by the fact that they all contributed to the costuming of Caesar by bringing tunics, swords, shields, and other paraphernalia from their homes for his use.

DISCUSSION:

This is the highest type of control as it shows that the urge toward right is from within—that character has been built in the child. This end is reached by building up in the children right habits, ideals, and attitudes through the discussion of problems which grow out of their immediate experiences. When the class as a whole sets up its own standards of work and behavior and each child lives up to them, sharing responsibility and making all decisions with reference to the good of the whole, we have unselfish self-control.

DETERMINING TEACHERS' MOST SERIOUS CONTROL PROBLEMS

Many more or less scientific studies have been made to try to determine just what are the most serious problems of control that teachers are meeting almost constantly. A description of a simple study of the kind will be sufficient to show the procedure usually used and the results obtained, which are indicative of situations in the nation at large. The study was undertaken at Teachers College, Columbia University, under the direction of Professor Milo B. Hillegas. The procedure was as follows:

1. For a period of eighteen weeks careful note was made of all the teaching problems which were brought to the attention of a training-school supervisor by twelve of the student teachers.

2. These problems, after their classification, formed the basis of a questionnaire which was sent to one hundred teachers who had had less than two years' experience. The teachers were asked to indicate whether the problems listed occurred often, an average number of times, or seldom. They were also asked to state with whose help they solved such problems.

3. The results showed that *control* problems such as difficulties in discipline and difficulties in building habits of good citizenship were felt more keenly than difficulties met in teaching the various subjects.

Tables I and II on pages 121 and 122, respectively, which deal with control problems, show the percentage of teachers feeling each problem, the degree to which each is felt, and the percentage of help received from various sources.

THE SOLUTION OF CONTROL PROBLEMS

The solution of control problems is merely a matter of modifying behavior. Before a teacher can make any change in the behavior of a boy or girl she must know why it gave

TABLE I
DIFFICULTIES IN DISCIPLINE

RANK	DIFFICULTIES IN DISCIPLINE	% OF TEACHERS FEELING			DEGREE TO WHICH FELT			HELP RECEIVED IN OVERCOMING DIFFICULTIES							
		Met often	Met an average number of times	Met seldom	% unsolved	% solved through common sense	By means of theory courses	Through practice teaching	With help of principal	With help of teacher	With help of supervisor	From books			
1	Cheating in school work.	87	8	45	34	6	45	12	12	6	1	1	4		
2	Tale-bearing.	85	36	30	19	25	50	2	2	2	2	2	0		
2	Discourtesy—rudeness	85	15	42	28	11	43	6	9	7	8	1	1		
3	Abnormal children	83	9	40	34	18	14	19	7	16	7	1	1		
3	Keeping all busy.	83	13	49	21	5	12	3	34	7	10	0	0		
4	General disturbance	78	27	27	24	12	30	9	18	0	8	1	0		
5	Stealing.	77	5	19	53	9	30	4	5	22	4	2	1		
5	Lying.	77	9	45	23	5	35	11	5	16	4	1	0		
5	"Smartiness"	77	19	34	24	14	38	5	7	9	4	0	0		
6	Talking too much (at the wrong time)	72	16	28	28	11	37	3	13	1	6	1	0		
6	Obstinacy.	72	6	24	42	10	31	7	8	5	0	0	0		
7	Impertinence	70	15	17	38	8	37	4	6	9	4	0	2		
8	Sullenness.	65	6	13	46	9	36	2	4	9	5	0	0		
9	Disorderly conduct in halls	64	9	34	21	0	37	2	4	21	0	0	0		
9	Disregard of yard rules	64	6	34	24	0	28	2	4	28	4	2	0		
10	Willful disobedience	59	2	11	46	2	26	1	7	16	7	0	0		
11	Bossiness.	57	0	19	38	7	31	12	5	0	2	0	0		
11	Note-writing.	57	8	17	32	8	37	0	2	5	5	0	0		
12	Spoiled children	55	2	15	38	2	27	8	8	7	3	0	0		
13	Immoral conduct.	46	3	10	33	6	16	3	1	17	3	0	0		
14	Refusal to abide by decisions of majority	40	4	8	28	0	32	4	4	0	0	0	0		
14	Speaking disrespectfully of teachers.	40	4	0	36	0	32	0	2	4	2	0	0		
	Average of difficulties in discipline	68	10	26	32	8	32	5	7	10	4	1	3		

TABLE II
DIFFICULTIES MET IN BUILDING HABITS OF GOOD CITIZENSHIP

RANK	HABITS OF GOOD CITIZENSHIP	% OF TEACHERS FEELING THE DIFFICULTY			DEGREE TO WHICH FELT			HELP RECEIVED IN OVERCOMING DIFFICULTIES						
		Met often	Met an average number of times	Met seldom	% still unsolved	% solved through common sense	By means of theory courses	Through practice teaching	Through help of principal	Through help of teacher	Through help of a supervisor	From books		
1	Promptness	91	53	15	12	33	2	18	13	11	1	1		
2	Maintaining good posture	87	42	17	11	30	22	13	0	3	5	3		
3	Orderliness	85	19	51	8	44	5	17	3	5	0	0		
4	Thrift	81	19	49	13	10	28	18	11	3	6	0		
4	Courtesy	81	26	45	10	15	50	0	0	0	2	4		
5	Cleanliness	79	24	30	8	29	10	6	9	9	6	2		
5	Attention	79	22	33	13	34	10	18	0	2	2	0		
6	Accuracy	77	17	47	13	23	6	19	3	7	3	3		
6	Good sportsmanship	77	11	53	3	29	17	13	10	4	0	1		
6	Perseverance	77	15	38	16	22	12	16	0	5	6	0		
7	Seeing things through	74	22	37	15	12	26	12	2	4	4	3		
8	Hygienic habits	72	15	38	9	16	20	10	0	3	10	4		
8	Clearness in oral and written expression	72	30	32	10	13	8	23	3	4	4	4		
9	Respect for school property	70	11	38	21	3	38	5	13	3	0	2		
10	Cooperation	64	9	26	29	3	31	15	3	2	0	0		
10	Criticizing kindly	64	9	27	28	6	23	12	0	8	2	2		
11	Profiting by suggestions of group	59	8	32	19	10	23	6	0	0	2	0		
11	Respect for age and authority	59	8	28	23	5	28	5	9	5	2	0		
12	Breaking injurious habits	51	9	28	14	4	13	15	12	3	2	0		
13	Appreciation for other races	49	13	13	23	6	14	10	8	3	5	3		
	Average habits of good citizenship	72	17	37	18	9	27	11	13	4	4	1		

the child satisfaction to do the wrong thing. This known, she must set about to find out how she can make the doing the right thing more desirable than the doing the wrong thing. Finally, when the child shows his intention of behaving correctly, he should be given as many chances as possible to exercise this new resolve.

For example, the children complained to the teacher that their pencils were continually disappearing. Suspicion pointed to Mary, who was discovered with a pencil belonging to another child. When confronted with the evidence she admitted having taken many pencils and offered to bring them all back from her home. When asked about her activities along this line she said she found the first one on the floor and didn't try to find the owner because it was pink. No one ever called for it. If the teacher had built up in the children the idea that it is more delightful to bring to her even pink pencils found on the floor than to keep them, the child would not have started to build up a bad habit. Since Mary had experienced satisfaction the first time, she began to look for opportunities to secure pencils; she took them from the tops of desks, from pencil boxes, and even from the teacher's cupboard. By the time she was caught she had built up a real habit of stealing which had to be broken down completely. Every pencil she saw suggested to her taking it.

In dealing with the case the teacher secured Mary's confession and her promise not to repeat the offense. The pencils were restored to their rightful owners. The disapproval of parents, teacher, and classmates proved dissatisfying enough to weaken the desire to take the pencils of others. Later she became the pencil monitor of the room, whose duty it was to collect and sharpen all the pencils in the room, returning each to its owner. The teacher took great care to praise highly her efficiency in this office.

In making any desirable changes in the behavior of individuals or groups every teacher should keep in mind that:

1. The child to be changed must *see* the error of his ways and *will* to improve. How to make him see that he is

wrong and wish to do better are matters which test the ingenuity of the teacher. She must know how to reach each child—for one method will not suffice for all. Some will respond to reasoning, but with others it may be necessary to inflict physical pain. Each child should be reached through the highest and best method possible to make him *see* and *will*.

2. When the “mind is made up” to improve, then teachers should help support and strengthen this resolve by showing just what improvement is desired and how it can be secured. Just as a baby must be supported when taking its first steps, so must the child who is trying to break one habit and learn another be aided.
3. The teacher should see that there are enough opportunities for the child to act in the right way to make such right action automatic.
4. The teacher should see that the child feels satisfaction when he responds in the right way and that wrong responses cause dissatisfaction.
5. The teacher must see that no exceptions pass unnoticed.

CASE STUDIES

PROBLEMS DEALING WITH PROMPTNESS

CASE I:

Very often a few members of the group or class will develop a tendency to be unready to act with the group, thus holding all back. To prevent the habit from becoming fixed, some of the following devices may prove helpful:

1. Speaking quietly and privately to offenders
2. Telling the whole class a story of how a perfectly nice boy or girl lost a good position by betraying a lack of promptness, and adding that there are some in this class who may do likewise if they continue to keep others waiting for them
3. Talking over privately reasons for the pupils' unreadiness, helping them to overcome obstacles in their way
4. Encouraging other children to tell why it is that they are always ready

5. Letting the class tell stories about cases they have known in which "awful" things happened when people were not on time
6. Asking a pointed question before the class such as, "John, do you think you've the right to keep forty others waiting while you hunt for your pen?"
7. Asking another question of the class, "For whom did we have to wait yesterday?" Answer, "John." "Yes, and day before and the day before that?" Answer, "John." "Yes. Do you like to wait every day for him?" Answer, "No." "Why not?" The class discuss the situation, bringing the lesson home rather pointedly
8. Proceeding without waiting or without repeating, thus causing the child to experience the unpleasantness of handling in incomplete work or hurried work, which of course should not be accepted
9. Asking the child who is not ready to wait and do his work after school when "he will have plenty of time and not interfere with the rights of others"
10. With younger children, praising those who are always prompt brings the others into line, but in grades above the fourth, discretion must be used, for boys, especially, of that age, do not enjoy being singled out and praised before the class. General remarks of this kind are more effective, "We are certainly carrying on our business more efficiently this morning. Even an efficiency expert could find no fault with our speed!"

CASE II:

A group of fourth-grade children were in the habit of taking too much time to get ready for the spelling lesson which came immediately after their "unassigned" or "free" period. They had been told repeatedly that they must be more prompt, but to no avail.

One day, when the teacher had finally determined that this state of affairs could go on no longer, because of its bad effect upon the habits of the children, she gave the signal for the free period to end, but did not follow the children about trying to hurry them. Needless to say, since they were in the habit of waiting for the *nth* warning, they kept right on at their own pursuits for at least twelve minutes longer. By that time most of the children had become aware that it was time for free period to end, partly because they were tired of what they were doing and partly because of the unusualness of seeing the teacher apparently unworried over their lack of promptness. The teacher then

calmly proceeded with the spelling lesson. The day's program moved on uninterrupted until the time for literature arrived. Instead of remarking that it was time for *Robin Hood* the teacher announced an arithmetic study period which ordinarily followed the story period.

The children were surprised! They all began to talk at once trying to tell the teacher that it was "story-time." When the riot was somewhat under control she said, "It is now eleven-forty and if you will notice our program you will see that the time from eleven-forty to twelve is to be devoted to the study of arithmetic. Am I not right, children?" They knew she was right, but one child said, "But we didn't have *Robin Hood* today."

It was then the teacher's turn to say, "No, John, we didn't have *Robin Hood* today and we can't have it because evidently we have already used the time."

"How?" came in chorus.

"Can't you bright people think?"

"Yes," said a little girl. "We didn't stop free period on time. We kept right on working when Miss Martin told us to stop!"

"Emma is right. For twelve minutes you kept right on doing what you wanted to do instead of what you ought to have done. How much time do we usually spend on story-hour?"

"Only fifteen minutes," said the children.

"Well, if you used up twelve of those minutes how long could be taken for *Robin Hood*?"

The children answered, "Three minutes."

"In three minutes we could scarcely get a good start."

A *Robin Hood* devotee spoke up, "Well, why can't we leave out arithmetic?"

"Well, John, why not?"

John knew that "We have to know arithmetic. We have to pass our tests. It is a most important study. It takes a long time to learn it."

The teacher then said, "I can't say it is more important to us than are fine stories, but we do have to learn it at school and you can read stories at home."

Another child spoke, "Yes, we can read at home but we can't get the same book of *Robin Hood* in the library. I've tried. They have Pyle's *Robin Hood*, but not Johnson's."

The teacher told them she was very sorry and that they would all have to wait and share together her copy. She also said that as they had consumed much more than the remaining three minutes discussing why they could not have their story it would be well for all of them to begin to work now so as to make sure of it next

day. They worked with a vim and next day when the signal came for free period to end only a few loitered as usual, but they were quickly brought to time by the story lovers so that only two minutes were lost. Those two minutes were subtracted from the fifteen by the "hard-hearted" teacher. She kept this up until in a few days no time had to be taken from the literature period. By the time *Robin Hood* was finished the habit of being prompt to obey signals was firmly established.

Outstanding features:

1. Group as a whole was at fault and therefore the whole group must be made to feel dissatisfaction
2. Dissatisfaction caused by depriving them of the thing they valued most as a group
3. Control assumed by members of the group who felt the deprivation most keenly
4. Desirable responses made satisfying by restoration of the valued story period
5. Device used until the old habit was completely broken down and the new and desirable one was made automatic

CASE III:

This particular class was rather unusual in its ability to work. Almost as soon as an assignment had been given, the children attacked it with vim. This was true in the case of all subjects but one. With English composition it was entirely different. After the assignment was made most of the children would waste at least one-third of their time asking needless questions, chewing their lead pencils, looking up words in their dictionaries, and doing anything except writing. This meant that the papers either remained unfinished or else that the children were made to finish them after school, which only made matters worse in that the attitude against composition writing became strengthened. As time went on the groans actually became audible as the composition lesson was announced.

Finally one day after the usual groaning the teacher asked, "Well, girls and boys, why all this moaning and groaning on composition day?"

The answers were:

"Aw! I never can think of anything to write."

"When I do get started I always have to stop and finish after school."

"It seems as if we never do write about anything interesting."

The teacher then told the children that on that day they would not write, but that she wanted to ask them if they thought it necessary to learn to write. After a discussion of the question the

children decided that there were many good reasons why people needed to learn to write fairly well. They also admitted that they needed practice along that line.

That day the teacher did some thinking and decided:

1. That the topics in their English texts were not live enough to interest the children
2. That her assignments had lacked stimulation and motivation
3. That she had probably expected them to do too much alone and unguided

The following day nothing was said about composition, but at noon she put the following paragraph on the board:

Who is that small, vivacious little woman in the red sweater? She is standing on the front steps with arms folded talking to Mrs. Mazziotti. She is not so tall as Tony or so heavy as Marie, but she is very wise. She knows all of us. She goes to visit our parents; she sends the nurse when we are ill; and she teaches our mothers to speak English. In fact she is the only teacher that the whole community knows and loves.

Yes, it is _____.

When the children came in they noticed it immediately and began to ask questions:

"What's that for?"

"Is that a guessing game?"

"May we guess it?"

"I know who it is. May I tell?"

As soon as the children had all read it and had guessed that it was Miss Smith, a much-loved home-teacher, the teacher said, "I have another here. Shall I read it?" The class were eager to hear it. She read:

Who can the person be who seems to know all we do and shouldn't do? In the morning it is she who wakes us up, tells us to hurry, and then sends us back to wash our necks and ears. It is she who insists that oatmeal is good for growing children. It is a picture of her that we carry with us always, as dressed in starched gingham she stands framed in the doorway watching until we safely cross the street and turn the corner. Who can it be? Why _____ of course.

The children were delighted. They clamored for more and were most disappointed when the teacher said that she hadn't had time to write more. She also added that clever writers could really compose much more subtle and difficult products.

By that time some of the children were already writing. Others exclaimed, "May we make up some?" One boy who hated composition day said, "I've got one almost done." All of them wrote hurriedly and frantically in order that they might have time to read and guess them. They had a splendid time!

At the end of the period the teacher remarked that it was too bad Ralston, who was ill, had to miss the good time. A child suggested that they send him their "guessing stories" to amuse him while he was getting well. It was a good suggestion. The teacher asked how many would be willing to send theirs. They all were. She then suggested that they hold them up for her to see, as they were being sent to a sick boy. Some held back, so she said, "I don't blame you a bit, for I wouldn't want anybody to see my first copy either!"

The class were more than willing to copy them on clean paper with pen and ink and in so doing corrected many errors which had been made obvious as they had tried to read them. Ralston had a fine time guessing them and wrote a note to thank the children. He also expressed a desire to get back quickly so he could find out whether he had guessed correctly.

While the teacher tried to a greater extent to tie up the writing with social science, the composition period still remained. She made further use of this game idea for several lessons. The descriptions became more elaborate, greater stress being laid upon choice of words and word pictures. From descriptions of present-day characters they enjoyed working up those of the past.

Ralston suggested that, since he had enjoyed so much the guessing stories which the class sent him, it would be nice to make a "Fifth-Grade Guessing Book" which could be sent to sick people or loaned to other classes for "social hour." This motivated the copying and recorrecting which needed to be done. This whole device had wakened the children. The attitude against writing was being undermined, but the teacher was afraid it was not entirely uprooted so she passed on from the game to another type in which she wrote on the board:

Under the large blossoming apple tree at the end of the orchard lay a small freckled lad of about ten summers, fast asleep. Even the bees that buzzed around his bare toes didn't waken him, nor did the low growl of his pet dog bother him. His fishing rod stood against the trunk of the tree with a can of angle worms beside it. Occasionally a shower of apple blossoms fluttering from the tree fell upon him.

After the children had read it they discussed the possibilities

in a paragraph of this kind and then eagerly set to work to bring some action into the scene.

Another device which they specially liked was really an exercise in the use of quotation marks. The teacher put on the board this story:

Little Mary left the house, spic and span in a clean, stiffly starched, white dress. As she was walking near the curb, a street sprinkler passed and simply drenched her.

When she had recovered her breath after such an unexpected shower bath she said, "My, I'm glad it was clean water instead of the muddy kind an automobile would have thrown upon me!"

The children caught the philosophy quickly and responded with some really clever bits of humor. The laziest boy in the class wrote something like this:

A boy had to go on an errand for his mother. He had to climb a hill. When he got to the top he said, "My, I'm glad I didn't have to climb a mountain to get those eggs!"

Devices of this kind were used until the children no longer despised composition day and were no longer loath to begin to work on time. It is true, of course, that some of the children never liked written work so well as they enjoyed playing ball or pulling taffy, but much improvement was shown in the working atmosphere.

Outstanding features:

1. Whole group seemingly at fault
2. Teacher diagnoses the fault as her own
 - a. Failed to make composition lessons appeal to children's interests
 - b. Care not taken to establish a readiness for the lesson through careful motivation
3. Teacher prepares most carefully
 - a. Plays upon instinct of curiosity
 - b. Uses material which she knows will appeal to children
4. Makes it so interesting to write that the children forget that they do not enjoy writing
5. Attaches much pleasure and satisfaction to composition period
6. Reduces unpleasant features to a minimum
7. Teacher continues to work for proper attitude

CASE IV:

John was habitually late for school. His mother's spankings and the teacher's scoldings and deprivations seemed to have no

effect upon him. He started from home in plenty of time but he always found so much of interest on the way that it was hard to make the thought of school hurry him.

The one thing John liked best in school was arithmetic. He had passed more of his fundamental tests than any other child in his group and had worked farther in his arithmetic book.

Morning exercises, consisting of a brief assembly meeting or of a discussion of current events, came first thing in the morning, and evidently John cared not a whit for this. The teacher noticed one morning that John was going to be late again so she said to the class, "Today we shall have assembly at eleven-forty-five instead of now. Monitors may pass goal sheets at once." The arithmetic drill proceeded. John entered just as the sheets were being collected. The teacher said, "Oh, John, I'm so sorry you are late again. You've missed your goal tests. If you don't watch out Henry will catch up with you."

During the day John stole up quietly and asked Miss Martin if he might take his test after school. Miss Martin said, "John, I do that sometimes if tardiness cannot be avoided. Have you a good excuse for your tardiness this morning? Did your mother make you late?" Of course he had no excuse so Miss Martin remained firm and said that under the circumstances it couldn't be done.

Then he asked, "Are we always going to have arithmetic first?"

Miss Martin wasn't certain but told him that all the children liked it that way, for they felt like plunging right into real work the minute they got into the classroom.

John looked thoughtful as he took his seat. He was on time the next morning and continued to be until, after several months, Miss Martin tried to change the periods back to the first arrangement. John was late the second morning but again missed his arithmetic. After that he was cured. He seemed to realize that something very unpleasant would happen to him every time he loitered on the way.

Outstanding features:

1. Individual child at fault
2. Tardiness made dissatisfying to him by arranging program so as to deprive him of what he most liked when he was not on time
3. Dissatisfaction repeated until bad habit is broken down, while satisfaction was made to attend the right response until the good habit was stronger than the bad

CASE V:

James was never ready to begin work. He couldn't find his

pencil; he couldn't find his paper; his book couldn't be found anywhere; or maybe his penholder had rolled away! He seemed to be continually rummaging about in his desk, searching for something, when he ought to have been ready to begin work.

The teacher had gone through the usual admonitions, "You are keeping all of the others waiting," "Don't be so slow!" etc., but still he was slow. Finally she asked him to remain after school when she could take time to talk over with him his unbusiness-like ways.

During their conversation he said, "I don't mean to be slow, but I can't find my things some way. They are never where I put them."

Although the teacher knew what she would find, she asked if she might look inside his desk. Such a sight! "It looks pretty messy, doesn't it, James? I think that is why you can't find your things, don't you? James, who is the very quickest, most efficient boy in the room?"

James mentioned Donald, who was generally recognized as an exceptionally good worker.

"Well, I'm sure Donald wouldn't mind a bit if we peek into his desk to see how he has his books and tools arranged."

They observed together that the large books were placed on the bottom with the smaller ones on top. The books were not placed under the inkwell because some of the ink might spill on them, but the tablets and papers were placed there. The pencils, pens, and erasers were placed in the middle or between two piles of books and tablets.

James was then asked if he thought he could make his desk look that way. He thought he could, but before he tried the teacher discussed with him the method of doing it and suggested that he should throw into the wastebasket all the old papers he didn't care for and put the others into a drawing-paper folder to keep them straight and neat. She told him that when he had finished the job, Henry, another child, would judge which looked better, *his* or Donald's.

The child worked long and hard. Henry decided that James's desk looked just as well as the other and might really look better if he would get a pencil box in which to keep his small supplies.

James did not immediately change into a neat, speedy boy, but a step in the right direction had been taken. His lapses grew fewer and fewer as the teacher took added pains to praise his efforts at haste. She saw to it that he was elected desk inspector for the room, a position which demanded that his own desk be an immaculate example.

Outstanding features:

1. Child habitually unready to begin work due to disorderliness
2. Child made conscious of reason for his lack of promptness
3. He was shown how to improve his ways
4. He was encouraged and praised when his efforts were in the right direction

CASE VI:

Laura was one of those overfat youngsters probably with something physically wrong to cause such obesity in one so young. She moved slowly, talked slowly, and thought slowly. Naturally she was not so prompt as the other children. It took her twice as long as the average child to do her work.

Making changes in behavior through changing the diet is a slow process. Arrangements were made at school for the child to enter an ungraded room as soon as there was a place for her, where she could have more time and would not render a whole class less efficient. But before the transfer could take place she was simply given a corner seat in the room, the place least noticed by the other children. Here she was allowed to proceed at her own pace with no danger of being "nagged" at for what she could not help. She was allowed as much time after school as she desired to finish her work.

Outstanding features:

1. Individual child at fault
2. Cause of slowness physical; impossible for teacher to produce desired changes without help of parents and physician
3. Child so placed in room as to be removed from eyes of class, thus reducing unfair and unjust criticism from the other children
4. Removal into a special room advised

CASE VII:

Billy was a tiny mite for his class. His hands were rather old-looking but his eyes were bright and so was his mind. But Billy was never ready to begin work, and when once he had got around to work he was never ready to stop. His papers were never ready to be handed in with those of the class. When the teacher had begun to pronounce the words in spelling Billy was still arranging his books, looking at his pencil points, or adjusting himself to the task of getting ready to write. The usual procedures for making children prompt were tried. Billy was made conscious of his fault by such constant reminders as:

"Billy, the class is waiting."

"Billy, you've kept the class waiting two minutes now. Do you know how many minutes that would make if there are thirty

children in the room?" (Billy calculated it up nicely, thus holding the class back several more minutes.)

"Billy, do hurry up. You are always late!"

"Billy, if you don't hurry I'll give you zero on your paper."

Billy was marked down for failure to complete his work. He was kept after school to finish his work which he did graciously, slowly, and sweetly. The teacher wished to praise instead of blame, but never once did the opportunity arise.

Finally, one evening when Billy heaved a little sigh as he handed in a very neat paper at least forty-five minutes after the other children had all gone home, the teacher said, "Billy, you do hand in very neat-looking papers, but it takes you so long to get started."

"Yes, Miss Horton, but you see by the time I get everything ready the others are almost through."

"But, Billy, what do you mean by getting everything ready?"

"Oh, I mean my pencils all put in my pencil box and locked up so no one can get them, and my books all put back just right. And sometimes I have to throw some paper away 'cause I don't allow it in my desk."

The teacher was puzzled, for here was one good habit apparently interfering with another. But she did say, "Wouldn't it be all right to let the pencil box stay unlocked just while we write our spelling? No one could take your pencils when you are sitting there at your desk."

Billy said, "No, No! I couldn't leave it unlocked. My mother wouldn't allow it!"

Not long after, Miss Horton had a long talk with Billy's mother, and it developed that this habit had been intentionally built up in Billy at home, sometimes by painful methods that he had cause to remember. For this reason he felt that "order" must be maintained at all costs. Billy was also examined by a competent physician who attributed his tiny stature to serious pituitary trouble which in itself would make him different from normal children.

With the mother's help and permission Billy was persuaded to perform his housekeeping duties twice a day only—before luncheon and before leaving at night. This resulted in some improvement but even to the end he was always slower than were the other children.

Lest he should be overtaxed physically recommendation was made that he be allowed special privileges so that he would not suffer under the nervous strain of trying continually to compete with well children.

Outstanding features:

1. Individual child at fault partly because of an "order" complex and partly because of pituitary trouble
2. Impossible to change child's habits without mother's aid
3. Expert advice of competent physician sought

PROBLEMS DEALING WITH POSTURE

CASE I:

Many of the children had the habit when sitting of sliding down until their spinal cords rested on the front edge of their seats. This position caused shoulders to be hunched over, with necks bent and chins almost touching chests. Feet often blocked the aisles. The class presented a lazy-looking, unnatural appearance. When they stood, they hung onto their desks or placed a foot in their seats. They slouched.

The children were good-natured country boys and girls who really wanted to learn. The teacher realized that many of them were tired from their long walk to school after performing the morning's chores, but she also knew that bad posture habits are neither restful nor healthful. The children always responded quickly when she asked them to "sit up," but a few minutes later she would find them slouching again. She determined to make good posture her chief goal until permanent results could be seen.

She waited until nearly all of the children were slouching again. Then she said to a fine big lad, "John, will you please come outside with me for a moment?" After some difficulty John extricated himself and complied.

They walked outside the door where the teacher said to him, "I wish you would walk to the door with me, look at the room carefully, and then be ready to tell the class what your impressions are."

He looked them over. By that time the children were curious. The teacher said aloud for the benefit of all, "John, will you tell me honestly what you thought about the children as you entered the room?"

He said, "They look as if they are asleep, they are lying down and look lazy."

"If you were a visitor, would you expect much of them?"

John said that he would not, because they looked too sleepy.

By that time they were all sitting up, ready to listen. The teacher said:

"I am not surprised that John thought you lazy. He couldn't help it. It is too bad, for you really aren't lazy. You are good

workers in all respects but one. You don't work for your own best interests. It isn't serious that visitors might think you lazy; it isn't serious that it makes me sleepy to look at you lolling around; it isn't serious that teachers from the city would say, 'Oh, that's what you can expect from children who live in the country!' But it is serious that you don't think more of yourselves, of the bodies that you will have to carry with you as long as you live. Henry, what would happen to a young tree if it were tied at the top to a post several feet away?"

"I think it would grow that way. It would always lean toward the post."

"Why?"

"Because if the young tree is bent the old one will be."

"That is quite true. What has that to do with us, Thomas?"

"I think it is the same way with us. If we bend over when we are young, we'll be stooped men and women."

"Do you admire people who are bent? Just look at Mary's grandfather. We all admire him. How old is he, Mary?"

"Eighty-two, Miss Hanson."

"He is as straight as an arrow and has always worked hard. He likes to hold himself erect. Mary, show us how he sits in a chair." Mary complied.

"You see, boys and girls, he doesn't lie down in his chair, and I know he never did have that bad habit."

"You admire George Washington, Thomas Jefferson, Theodore Roosevelt, and others, don't you? Let us look at these pictures of them. Do they look as if they had lolled in their chairs? Here are some pictures of the statues of Grecian and Roman gods and goddesses. What do you admire most about them?"

The children spoke about their posture.

"What other people do you admire?"

The children mentioned Babe Ruth, Douglas Fairbanks, and others.

"How do they hold themselves?"

The children discussed them.

"You see, all of you admire that which you will not have unless you try much harder to sit and stand straight. Which boy would have the better chance of getting a position, the one who looks like this [illustrates good posture], or one who stands this way [head bent, shoulders stooped, abdomen thrust out, knees slackened]?"

Of course they believed the first boy would have the better chance.

"How many of you would really like to grow into erect men

and women? We can't all be beautiful, but we can have good posture."

They all responded.

"Now, just what do we mean by a good sitting position? Do you notice how the backs of our seats are rounded in at the bottom? That is so we can sit with our hips back. Let's try it. What does that do to the upper part of our bodies? Forces it to be erect. Our feet should rest flat on the floor. We should not have to reach up to our desks when we write, nor should we have to stoop over too far."

The teacher observed that a few of the desks were too small for some of the larger boys. Tables and chairs were secured for them after negotiation with the trustees. Footrests were made for some of the smaller children. Seats were changed until sitting erect was made possible for all.

Good standing position was discussed with the children. It was decided that the weight of the body should be evenly divided between heels and toes, and that the feet should point straight ahead, about two inches apart. Hips and abdomen should be held in. Backs should be flat and heads should be held erect with chins in.

Each child made a written declaration of his intention to improve his posture habits. At the close of each day with the help of class and teacher, each individual marked himself on a chart of this kind:

POSTURE CHART

Names	Mon.	Tues.	Wed.	Thurs.	Fri.	Average
Mary	3	2	3	2	3	3
Thomas						
Class Average.						

Key to chart: Excellent: 3 points; Good: 2 points; Fair: 1 point; Poor: 0 points.

On the whole a marked improvement was shown, although with some pupils the teacher's approval or disapproval was constantly needed to the end.

Outstanding features:

1. Class faulty in posture habits
2. Teacher led them to feel a desire to improve
3. Teacher made clear to them just what good posture is
4. She made it possible for them to attain the right habits

CASE II:

Young children have fewer faulty posture habits than older ones, although they are apt to form them in the lower grades if confined to cramped unnatural positions for too long at a time. They are imitative and respond readily to the teacher's posture. Also mere suggestions such as, "Just look how tall Betsy is sitting," "Billy has such a nice straight back because he always sits tall," or "I like the way Mary stands when she speaks to us: she stands away from the desk and stands tall," will bring the desired results.

The teacher must be ever watchful to make such suggestions when needed.

Outstanding features:

1. Little children naturally have good posture
2. Teachers must be watchful to maintain such correct, natural habits
3. Imitation and suggestion can be used successfully with them

CASE III:

Thomas was a large overgrown lad who was obliged to add to the family income by running errands at night for the grocer and by selling newspapers in the morning. As he was so much larger than the other boys he naturally stooped over to be on a level with them. One shoulder was considerably lower than the other, probably due to slouchy posture habits and carrying loads too heavy for him in his early life.

In tracing his spine the teacher found that it seemed to have an unnatural curvature. With the consent of his parents the case was referred to the orthopedic clinic for treatment. A thick shoe sole was made for him and exercises prescribed. His duties were made lighter. After a year, a great change for the better was noted in Thomas. Improvement in posture caused improvement in his school work.

Outstanding features:

1. Posture defect beyond teacher's correction. Expert advice needed
2. Orthopedic clinic achieved desirable results

PROBLEMS OF ORDERLINESS

CASE I:

It seemed to the teacher that the room always looked disorderly. Papers were scattered over the floor; all of the books in a child's desk might at any time clatter to the floor; erasers and chalk were scattered near the blackboards; books taken from the "browsing" table either were not returned at all or were thrown

upon it carelessly. The children seemed to have no class pride in the appearance of the room.

After waiting for some time one day for tablets to be extricated from their desks and pencils to be rescued from the floor, the teacher said to the children: "Not long ago I visited a classroom that I liked better than this one."

There came a chorus of, "Where was it?" "Why did you like it better than ours?"

"It was a little school attended mostly by Mexican children not far from the border line. See if you can guess why I might like the room better?"

"Because you like Mexicans?"

"I didn't say I liked the children better, so that isn't the reason, although I do like Mexicans."

"Because the room was decorated more."

"No, not exactly, but you are getting warmer, Mary."

"I know, the room looked neater than ours!"

"A good guess, John! Why do you think our room is not neat?"

"Oh, because things are all around. Everything's on the floor and the book table is all upset."

"Then you think we are not good housekeepers? I really believe I liked that other room because everything was in the right place! How many of you think we can be better housekeepers?"

They all thought so.

"Who will tell me how we can begin? Mary, can you?"

"I think we can keep the paper off the floor."

"How does it get on the floor?"

"It falls out of our desks."

"Shall we all take all the paper out of our desks?"

The children did this.

"What are we to do about this paper?"

"There are some papers I want to keep, Miss Brown." "I too."
"I too."

"Then, let's put those we wish to keep into one pile and put all others into a pile for the wastebasket."

The wastebasket was passed, but still the loose papers remained.

"Won't those papers soon be on the floor?"

"Yes, if we don't make something to hold them."

The children suggested a simple portfolio.

The question of orderly arrangement of their books was considered. The children decided to place them in two piles, one on each side of the desk, the large ones at the bottom with the smaller ones on top, putting pencils and pens in the center space.

When the desks were in order the teacher praised the pupils for

their ability in planning and asked if they saw any more room for improvement. They ran to pick up the chalk and erasers; suggested better ways of arranging the books on the table; rearranged the flowers on the teacher's desk; and also placed upright the overturned chairs. The teacher praised the appearance and orderliness of the room, but said, "It looks just as well now as the room about which I told you, but it won't stay that way!"

The children disagreed with her.

Then she said, "How are you going to prove that you can keep it this way?"

One child suggested that each child who was disorderly would have to stay after school to clean house. Another said someone ought to inspect the desks and room each noon and night. This suggestion was accepted and improvement began at once. By the end of the year many of the children had become very orderly, but almost daily several had to be made to clean house. It was the business of the teacher to hear and record the reports of these inspections.

Outstanding features:

1. Teacher made class feel a desire to be orderly through comparison with another group
2. Children suggested ways of improving
3. Children with the teacher checked daily upon improvement

CASE II:

The children were extremely disorderly about the condition of the papers which they handed to the teacher. The work was not placed on the page in an orderly manner. It did not seem to matter to them whether the papers were crumpled, dog-eared, and torn. They had no pride in the orderliness of their written work.

The teacher might have refused to accept any paper which was not to her liking, but she wished to build up in the children a consciousness of orderliness. So instead of putting the language papers that had just been collected on her desk for later correction, she asked a child to pin each one above the blackboard.

The curiosity of the children was aroused. They asked why the papers were being pinned up. The teacher told them that they were to study each one carefully and do one thing only: they were to place a cross (X) under those compositions which had been written upon a clean, uncrumpled, untorn sheet of paper. The children passed by rows and used excellent judgment. Out of twenty papers only four were found to meet the standard required. These four papers were then left pinned to the wall for exhibit. The next day the same procedure was followed. There proved to be few

who did not hand in a clean uncrumpled paper. The practice of pinning up the papers was continued until through pressure from the group and the teacher all the papers remained on exhibit for one day.

The teacher dealt with orderliness or arrangement in the same way, setting up standards with the children first and then permitting them to choose for exhibition those papers which met these standards. Neatness in penmanship, content of written work, punctuation, etc., were all improved in the same manner. The teacher may do all of the judging, but the children do not learn so much as when the responsibility is theirs.

Outstanding features:

1. Teacher and children set up approved standards in written work
2. Improvement in one thing only sought at one time
3. Improvement of group in any one thing achieved before beginning on another
4. Satisfaction experienced by children when standard is met

PROBLEMS DEALING WITH THRIFT

CASE I:

The children of the first grade had built a dollhouse large enough to play in. It was also their problem to furnish it. The boys volunteered to make the furniture. The girls were to make the curtains, bedspreads, table covers, and the clothes for the doll family.

It was customary for the teacher to discuss with the children their plans before they were allowed to execute them. On this particular day the girls thought they knew how to make curtains without talking it over with the teacher, and while she was helping the boys to start their work, the girls found the curtain material and began to cut curtains.

The teacher soon saw what the girls were doing but said not a word. Soon a child announced to her that the curtains were ready to sew. She looked at them and said:

"How many curtains did you need?"

The girls looked confused. No one knew.

The teacher said, "Isn't it rather queer to begin to cut out curtains before you knew how many to cut? How do you know that you have enough?"

They didn't know. She suggested that they count the windows. They found that they had seven windows but only five curtains. The teacher wanted to know what was the matter.

Some said that there wasn't enough material for any more. Others said that they had cut the curtains too big.

The teacher asked them how to find out how large to make the curtains and helped them to measure and make a pattern first. But it was too late to save the situation. Two windows had no curtains because the girls had been wasteful, a fact that the boys never forgot.

When the girls were to make the clothes for the family, needless to say they asked for help, and measured and planned before they cut into the material. It was a good lesson in thrift.

Outstanding features:

1. Children waste material through lack of careful planning
2. Feel dissatisfied because task cannot be completed and because the others show their disapproval
3. Ask for help in the next allied activity and experience satisfaction

CASE II:

Not all of the children could go to the blackboard at once, nor could each child have a very large space when there.

Early in the term part of them were sent to the board to write their stories for class criticism. John wrote several sentences and announced that he had no more room. Several others were about to do the same thing when the teacher asked them all to give attention to John's work. She asked them why John was able to get so few sentences on the board when Helen had written her whole story. The children decided that John had not begun his writing high enough on the board, that he had made his letters too large, and that he had allowed too much space between his lines. When the teacher asked John why he had done these things he said he hadn't planned beforehand to fit the space he had.

Mary had begun to write as large as John at the top and then had written so small at the bottom that her writing wasn't legible. The teacher told the children that made her think of the folk who spent heavily at the first of the month and then starved at the end all because they didn't consider at the beginning how much they could spend and plan to spend it evenly and wisely throughout the month.

The next time the children wrote at the board even John was able to finish his story.

Outstanding features:

1. Children wasted blackboard space
2. Teacher and pupils discussed how to get the most out of a small space
3. Class improved

CASE III:

It was time for written composition. The teacher noticed that James was borrowing paper again from Robert, so she said, "James, what is the matter?"

"I am borrowing some paper from Robert," he replied.

"But aren't you all supposed to have your own paper?"

"Yes, but I ran out of paper this morning and didn't go home for lunch."

"James, didn't you have a new tablet last week?"

"Yes, Miss Johnson, I have had one every week. My mother says I must eat my paper."

By that time the whole class was listening and Robert volunteered this bit: "I know why he uses so much paper! He buys ink tablets and they are only half as large as pencil tablets."

"I've noticed that too," said the teacher. "Let's see what a difference in money there would be in the cost of ink tablets and pencil tablets. How much do you pay for yours, Robert?"

"Five cents."

"How long does one last?"

"Two weeks."

"And yours, James?"

"They cost ten cents apiece and last one week."

When they had figured it all out James discovered that Robert would spend only one dollar each year while his expenditure was four dollars. He thought of several very nice things he might buy with the three dollars he really would waste unnecessarily. He was just as happy with less expensive paper.

Outstanding features:

1. Child bought more expensive paper than he needed
2. The teacher made him see how foolish he had been by showing him how much money he had wasted
3. Child used pencil tablets after the discussion

PROBLEMS DEALING WITH COURTESY

CASE I:

The children were eager, active, and aggressive and did not mean to be discourteous to one another. But every day during the discussion period they would all talk at once, interrupting one another and even the teacher. She admonished them gently at first and then more firmly. Finally one day when a child broke in upon what she was saying she stopped, looked directly at him until he finished speaking, and then quietly said to the class, "If Henry is through now, I shall continue."

Henry looked a bit confused and for several days was more careful. So were the others. His next offense came when a child was giving a report. The child tried to continue, speaking louder and louder until finally he said, "I don't think it is fair for Henry to want to talk all the time." The teacher thought the psychological moment had arrived for a talk with the group about their discourtesy, so she said:

"I'm glad Raymond has brought up this matter. I have felt it for some time and have been genuinely annoyed to see children from good homes so rude. For years I taught in the schools in a foreign section and almost never were the little foreign children rude. How many of you have noticed our discourtesy?"

They all had.

"Do you know better?"

They all acknowledged that they did.

"What shall we do about it?"

They suggested that they stop interrupting one another.

"But is that all we do? Let us list some of the things we should watch."

Their list consisted of:

1. Interrupting one another
2. Whispering together when others are speaking
3. Reading a book when reports are being given
4. Trying to monopolize all the conversation

"If we know we are guilty of these things, how can we make ourselves improve? How can we prevent the first?"

They concluded that when a person wished to speak he should rise for attention but it should be considered rude to rise while another is still talking. They felt that it would be more embarrassing to an offender to be caught rising than merely lifting his hand.

They also suggested that they check carefully their errors on a courtesy chart. Each child was to check himself each day upon the following points:

1. Speaking without permission
2. Interrupting the speaker
3. Inattention to the speaker
4. Speaking longer than necessary

Just before dismissal each child was to mark on the board chart the number of his lapses for the day. The total was watched with eagerness, and improvement was genuinely sought.

The device was successful and after a month was voted to be unnecessary.

Outstanding features:

1. Class had bad habit of "speaking out"

BOARD CHART

Name	Errors	Mon.	Tues.	Wed.	Thurs.	Fri.	Total
Mary . . .	1	6	2	0	0	1	9
	2						
	3						
	4						
Thomas . .	1	2		1			
	2						
	3						
	4						
Class Total							

2. Children were made conscious of their worst fault
3. They planned ways to overcome this
4. Improvement resulted

CASE II:

A very bright, unsocial only child of elderly parents proved to be a source of annoyance by his continual talking. The usual admonitions were given by the teacher such as, "Bennie, some one else is speaking;" "Bennie, you are really rude. Don't you know there are other children in the class?" The children complained openly and offered to do him violence on the playground, all to no avail. Punishments were tried. He was kept after school. His mouth was tied up with cheesecloth. His mother was consulted and even consented to his being spanked. He was paddled. None of these measures proved effective.

Finally the teacher told the child that it was impossible to keep him longer with the other children as he monopolized their share of attention. She arranged a table and chair for him in a small anteroom, gave him written assignments to do by himself, and heard his lessons after school. She continued this punishment for two weeks even though he begged to be permitted to be with the other children. It proved a cure, for ever after a mere look toward the anteroom would cause an immediate apology from him.

Outstanding features:

1. Spoiled, unsocial child determined to "speak out" continually
2. Mild punishments did not make him desire to improve

3. His satisfaction came from showing off before other children
4. Isolation with individual assignments caused his awakening
5. Steady improvement followed isolation

CASE III:

There entered into a rather well-trained group of children a large youth who wished to show the others how uncivilly he dared to talk to the teacher. When the teacher asked him a question he said, "Aw, gwan, I don't know!"

She knew she could count upon the training of the others so she said very courteously and quietly, "I beg your pardon, but I didn't understand you."

He repeated the same statement but with less force, so she said, smiling a little, in the same quiet way, "I really am very sorry but I still cannot understand you."

The third time he said quite meekly, "I don't know." Thereupon, the teacher said in her kindest manner, "Of course you don't, but never mind, you will soon become familiar with our work. I'm going to ask Jack [who was the finest lad in the room] to sit with you tomorrow during the study period and help you find yourself."

Nothing more was ever said to him. He was absorbed by the group and became a good worker.

Outstanding features:

1. Boy tries to call attention to himself through rudeness
2. Teacher meets him with gentle courtesy
3. Boy responds to courtesy
4. Absorbed by group

CASE IV:

A teacher, who loved both her work and the people of the community, had taught for years in the seventh and eighth grades of a small mining town. Her boys and girls had the deepest regard for her and years afterward many of them gave her the credit for starting them on their way to future success.

It was customary after finishing the eighth grade for the few who had the opportunity to attend high school in a larger nearby town. During the early years of this teacher's service she noticed that the boys and girls who were attending this high school were not especially happy and that many of them soon stopped making the effort to attend.

One evening she said to a particular favorite of hers who had returned for a visit with her, "James, tell me all about your work at high school."

He spoke rather glowingly of the work and mentioned particularly one teacher who had been a small-town boy himself,

but finished by saying, "Oh, Miss Wagner, I wish I were back here! I don't like it up there! I'm going to work in the mine with Dad!"

He had liked his work so well and had given such promise of future intellectual development that the teacher's heart was touched. She determined to get at the root of the trouble. She said, "Now, James, you know we expect great things of you. Your father and mother are sacrificing that you may do something more than work in the mine, although you must understand that in the end you will do well to become as fine a man as your father. You know how much I expect of you. Please be honest and tell me just what is troubling you."

He said, "I want to go on because of Mother, Dad, and you, but I don't belong there. I don't know how to act. I don't know what to say to be polite so I keep still and they think I'm foolish."

It was really a matter of not knowing some of the simpler rules of etiquette. Those boys and girls had not received the social veneer without which it is impossible to be happy in so-called good society. Slowly this deeply sympathetic teacher began to help him attain the little courtesies he lacked. He became much happier and later made it possible for the teacher to give a simple course in etiquette to the boys and girls, by returning to tell them why he didn't feel at home immediately in the town high school.

While some of the children and their parents retained a slight contempt for such "outward show" yet the children no longer suffered from lack of knowledge as to polite behavior.

Outstanding features:

1. Children lacked knowledge of social etiquette
2. Felt embarrassed by their lack
3. Teacher tactfully supplied the need

PROBLEMS OF CLEANLINESS¹

CASE I:

In some sections cleanliness should be the chief goal and effort should never slacken until it is attained. Where classes as a whole are not clean, usually conditions in the homes are to blame, and while these cannot always be remedied yet through the school notable changes have been instituted.

¹See also the department on Health and Physical Education in this volume and in the Primary, Intermediate, and Junior-High-School volumes for further discussion of this subject.

The children should know what is meant by cleanliness of body. The teacher can do much by presenting an immaculate appearance. She should let the children know that she is clean and expects them to be. They should work out with the help of the teacher the problems:

1. Why should I be clean?
2. How can I keep my body clean?
 - a. Keeping the mouth and teeth clean
 - b. Keeping face, neck, and ears clean
 - c. Keeping hands and finger nails clean
 - d. Cleanliness of body
 - e. Care of the feet
 - f. Care of the hair
3. How can I keep my clothing clean?

There should be inspection twice each day, at the beginning of the morning and afternoon sessions. This should be done by children selected by their group for their standards of cleanliness. Records should be kept upon individual cleanliness charts. In the lower grades gold stars (even if scorned by some educators) prove helpful in establishing hygienic habits. These charts might be similar to this:

CLEANLINESS CHART

Name..... Month of.....

Operation	1	2	3	4	5	8	etc.	Total
1. Hair	×	×	/	×	×			
2. Face-neck-ears								
3. Hands								
4. Nails.								
5. Teeth								
6. Clothing								
7. Baths								

Key: Cross indicates that the hair was satisfactory at noon and in the morning.
One line means that for one inspection only was it satisfactory.

The school should have facilities to aid in such a cleanliness drive, and children who do not respond to the "chart" and "discussion" methods should be sent from the room to "clean up." They should even be sent home to remain until some change is made in their appearance.

Outstanding features:

1. Children must know what cleanliness is and why it is desirable
2. Children must desire to be clean
3. Children must know how to attain this goal
4. They must have a drive to hold them to their habits

CASE II:

A teacher in a kindergarten of a large foreign school had difficulty in getting the children to come to school clean. Also they had no idea of how to bathe themselves, nor of the proper hours to rest.

She knew they were hungry for toys so she obtained a beautiful non-breakable doll with real hair and a complete outfit of durable clothes. She told the children that this little girl had come to make her home with them and that only those who were absolutely clean could play with her.

The effect this had upon the children was wonderful. Even the boys begged their mothers to bathe them so they could build a large blockhouse for the doll.

As the doll was washed, dressed, and put to bed at regular intervals the children gained much real knowledge of proper health habits.

Outstanding features:

1. Children not clean
2. Desire to be clean aroused by wish to play with a lovely doll
3. Learned how to live by caring for the doll as if it were a real child
4. Improvement seen even in boys

CASE III:

The children usually came to school in the morning clean, but after the luncheon period, part of which was spent helping the farmer next door consume his crop of cantaloupes, they trooped into the room, dirty, perspiring, and malodorous.

It happened that they were especially fond of drawing and were proud of their penmanship. The teacher arranged to have drawing on two days each week directly after a literature-appreciation lesson of fifteen minutes (placed there purposely to rest the children after their noon play), and penmanship on the other three days. She secretly hoped to arouse in them a desire to clean up through their pride in drawing and writing.

A clean white paper was given to each child. The teacher asked the children to be especially careful as she would like to use the results of the lesson as a wall border. As she walked up and down the aisles assisting and advising she cautioned them about not

soiling their papers. Several children asked permission to wash their hands but were refused because it was too near the noon period. But when it came time for class criticism, the papers were a sorry sight. The drawings were excellent but the papers were so soiled that not one could be used for decoration.

The teacher asked the children if she was going to be able to count upon them to decorate their room. They said she could and agreed to "clean up" before entering the schoolhouse if she would ring a warning bell. Most of them kept their part of the agreement and as soon as the cantaloupes were gone, a cleaner group could not be found.

Outstanding features:

1. Children fail to return to afternoon session clean
2. Subjects especially demanding cleanliness placed in the afternoon
3. Lesson a failure because of unclean hands
4. Children desire to clean up and suggest a warning bell
5. Success attained after new plan is in effect

CASE IV:

Kenneth came from a rather good home but evidently his parents had not stressed the combing of hair, for his was always standing upright. It was especially noticeable because his was the only uncombed head in the room. Almost daily he was sent to the basement to wet and smooth his hair, but there was no improvement. Finally the teacher kept him after school and showed him a small pocket comb in a case. She told him if he would comb his hair each morning and afternoon before school he might keep the comb.

Strange to say it "worked." It was a secret between the teacher and child. She praised his changed appearance and the children seemed to respect him more.

Outstanding features:

1. Child does not care to comb his hair
2. Desire created by offering of a comb which appealed to him
3. Teacher's approval and children's respect cause change to become permanent

PROBLEMS OF CHEATING IN SCHOOL WORK

Teachers cannot close their eyes to cheating nor should they hide behind a sentimental cloak of trusting children too far. They must be ever watchful to detect the first dishonest bit of work so that even a little response of this kind may not be strengthened into a habit by a successful attempt. Teachers must encourage

and inspire children in their honest responses in every way satisfying to them. The task is hard, but far more important to the nation than whether Johnny learns so much geography, important as that is!

CASE I:

This particular case happened in the days before standardized practice tests were in vogue. A sixth-grade teacher found that her pupils were able to master the principles of percentage, decimals, etc., in arithmetic but errors in the simple handling of the fundamental processes were so frequent as to cause serious concern. It occurred to this teacher that it would be a valuable thing to have on the board each morning five problems—one each in addition, subtraction, multiplication, short division, and long division. The children were to be allowed fifteen minutes in which to work these. The first five children who worked theirs correctly were to be “helpers” and aid the teacher in correcting. At the end of the fifteen minutes all of those rating one hundred per cent were to hand in their papers. The others were to keep theirs and hand them to the teacher for correction after school. No child was allowed to leave until his paper was correct.

This scheme was hard on the teacher but she was willing to teach those who didn't understand after school hours, as she didn't feel that she had time to develop these primary processes in the sixth grade during regular hours. Most of the careless errors were reduced to a minimum and children who had been lazy were made to learn their tables and combinations. At the end of a month very few children had to receive extra help.

There was one large Mexican girl who seemed to have no foundation at all. She would spend most of her time crying instead of applying herself, although she was capable of learning. One afternoon at three o'clock, however, Maria brought up a paper which was perfect. Of course the teacher was delighted, for she had visions of being able to leave before four o'clock, so she praised Maria highly. This continued for a few days when to her sorrow the teacher found Maria in at recess copying the problems from those papers that had been handed in as correct during the first period. When her stolen support was removed, of course, she was as helpless as ever.

At this juncture the teacher consulted other teachers who had had Maria in previous grades. Maria had cheated from the third grade on, if not in one way, in another. The teacher asked Maria about this and the child weepingly confessed that she had always got her arithmetic from other children. It was pointed out to her that that was why she had so much trouble now and couldn't

do her work. When the teacher suggested that, if she really tried hard after school, with the teacher's help she might be able to overcome this handicap, the child wept bitterly saying over and over that she couldn't stay after school as her father "beat her" every time she wasn't at home to get his four o'clock supper. The whole case was clear. Here was a child who had built up a whole hierarchy of cheating habits to prevent the physical torture that would follow were she to give the needed extra time to study.

Fortunately an understanding, sympathetic home-teacher who spoke Spanish was available. She and the teacher accompanied Maria home and found the most pitiful conditions. The mother was almost dead from tuberculosis; the father was at his wit's end to keep the wolf from the door and keep the home together at all. In order to take care of the mother and younger children the father worked during the early part of the night and did the best he could at home during the day after sleeping a few hours. In the face of all these real difficulties Maria's cheating could hardly be mentioned. Instead, arrangements were made by the home-teacher to secure the aid of county and city nurses. The mother was sent to a city sanitarium, and home conditions were decidedly relieved.

At school Maria was given simple problems each day which she *could* work, together with games of "number solitaire" which helped her to learn her combinations and tables. She was made an exception—one which the children respected when they were told of Maria's home responsibilities. As soon as a place could be made for her she was permitted to have her arithmetic in the ungraded room. By the last half of the second term she was ready to return to her class and work independently.

Outstanding features:

1. Child began to cheat because she didn't understand her work
2. Continued the cheating process rather than receive help after school out of dread of punishment at home
3. Relieving of home conditions caused a beginning of better things
4. Child given only such work as she could do independently with satisfaction to build up her self-confidence and respect
5. Work gradually increased in difficulty as she gained arithmetical control
6. Extra help given in good adjustment room
7. Child brought "up to grade" without the humiliation of being demoted

CASE II:

The same arithmetic activity previously described, in which

the five who finished first were allowed to help the teacher correct the rest of the papers offered a splendid opportunity for dishonesty to crop out. On one occasion in the spring the star baseball player suddenly joined the ranks of those who finished inside of fifteen minutes with perfect papers. His rise was too sudden to be explainable, so for a few days the teacher watched his work and noticed that the same boy corrected his work each morning and that the corrector talked a great deal to the boy while doing it.

On the following morning the teacher sent the corrector on an errand during the arithmetic drill period and the star ball player was not among those having perfect papers. But at three o'clock he came up with his paper at once. The teacher realized that he must have been helped some time during the day and while she was a strong believer in cooperation, she did not intend that the purpose of the drill work—that of making the children independent workers—should be destroyed. She felt also that the other children knew what was going on and decided to see what could be done with group action.

The next morning the children arrived and found no arithmetic problems on the board. When they asked about it the teacher told them she had an important matter to discuss with them which would consume the time of the drill period. She began by asking just how many children knew just what the drill periods were for. They all did, as the purpose and need had been made perfectly clear before they were first inaugurated; so the children answered that the drills were to teach them to perform the fundamental operations more quickly and accurately. They were then asked how many really felt that they had made progress. Most of them thought they had improved. When the teacher asked why they had improved some of the answers were:

"Because we have to get the problems right before we go home."

"Because you have helped us with long division."

"Because you made me keep a record of my mistakes so I could study the tables I needed most."

The teacher then asked the class if they felt it worth while to continue the drills. They did. She asked them if they felt that the requirement of asking for perfect papers was too hard. The answers were:

"No indeed! Sixth-grade people should be able to do that much."

"We must know our tables before we can do the problems in the book correctly."

The entire class felt the same as did the children who worded the above statements.

Then the teacher said, "I had no other purpose than helping you when I made the rule, but I'm afraid it was a bad rule because it has made two very fine people do something entirely unfair to themselves and not at all in keeping with ideals of square dealing on the playground and in school. I know it is the ball season and I know you boys are anxious to get out on time, but isn't there some better way of accomplishing this end than by dishonesty? What do you do with a dishonest player in a ball game? What is the result when you copy another's work in this drill work?"

"We never learn."

"We always have to look up the answers."

"Yes, we agreed really to learn the troublesome combinations and tables so that we might have them to use as tools, and if we don't play the game fairly we usually are beaten in the end. If you want to leave at three o'clock what could be done?"

"Talk to you and make other arrangements."

"Yes, I've always tried to be reasonable and fair, and I'm sure if the boys had asked permission to work at recesses or at noon it would have been granted. Now, rather than run the risk of having some of my boys grow up to be underhanded I'd rather have no drills and give no extra help. How do you feel about this? Shall I abandon the drill work?"

The children were anxious to have the drills, and to prevent further trouble they worded and recorded the following rules:

1. If it is impossible to remain, make other arrangements with the teacher
2. No help is to be given or received upon the drill work because we are trying to become independent workers
3. In order that no help be given, correctors shall neither talk to, nor listen to, the person whose paper is being corrected
4. If the rules are disobeyed, correctors may not be allowed the privilege of correcting again

After the rules were formulated the teacher said she would like to have the boys who had done wrong tell her in some way how they felt about the whole matter since she knew perfectly that they were fine fellows who wouldn't think of cheating in a ball game.

At noon when the teacher was on yard duty, the boys came up to her, and both of them expressed regret at what they had done. They said that they had now agreed not to ask to be excused except on the few evenings when there were games between schools and on those evenings the "corrector" would see to it that the "star player" did his work at home and "he wouldn't tell him the answers either"—that is if the teacher were agreeable to the idea.

The teacher suggested that if the brighter would help the slower with his tables and combinations by playing some simple games with him the difficulty would soon be conquered.

As a matter of fact the boy asked only three times for the special privilege, and under the tutelage of the other and the baseball urge besides, he improved immensely. Neither boy ever cheated in anything else during the entire year.

Outstanding features:

1. Baseball urge from without causes two boys to cheat to avoid living up to schoolroom rule
2. Pressure brought to bear by class and teacher through general discussion stopped it
 - a. Rule upheld by class as a good and necessary one
 - b. Ways of overcoming difficulty without cheating discussed
3. Boys not exposed to class for first offense
4. Boys discussed matter with the teacher and expressed regret which teacher accepted whole-heartedly
5. So far as the boys knew, the incident was closed forever with the teacher
6. Teacher constantly on the alert to detect any recurrence

CASE III:

Spelling was difficult for this particular sixth-grade class, but the class itself didn't seem to feel the need of putting forth any added energy toward making their records any better. In casting about for a device to spur them along the teacher decided to use a competitive race between boys and girls. She explained to them that she would place the girls' names in one row on the board and the boys' in another. Each day she would place a point after the names of those having perfect papers and at the end of the week the class would decide, upon a percentage basis, which had done better, the boys or girls. She added that she believed the girls would win!

The device worked, as one would imagine who knows the delight a normal sixth-grade class takes in competition between boys and girls. In fact it worked too well! One little girl named Violet handed in a perfect paper every day and won much praise from the teacher as well as from the other girls. The girls were winning and of course were gloating over the fact. All went well until one day just before the spelling words were pronounced an indignant boyish hand was waved frantically in the air. When asked what the trouble was he rose and said excitedly, "Miss Stevens, I don't think it's a bit fair for Violet to write her words on her desk during study period and then copy them off on her spelling paper when

you pronounce the words! It isn't any wonder the girls are beating if they don't play fair!"

The teacher, as well as the class, was stricken dumb for a minute, but Violet burst out into violent sobbing. The teacher walked down to Violet's desk and sure enough there were the two most difficult words written out as the boy had said.

Since the accusation had been public some public reproof had to be forthcoming, so the teacher asked, "Violet, what possessed you to do such a thing?"

The child answered, "Because I wanted to stay ahead—and honest, I haven't done it often. I just wrote 'physician' out yesterday."

The teacher said, "Violet, I would like to believe you but you'd have a hard time convincing the class that you played fair up to yesterday. I think we'll have to put it up to the class just what should be done about it. What is done to a person who doesn't play fair in a ball game?"

The boys said, "We beat him up!" or, "Kick him out of the game."

The teacher asked them if they ever gave a person a second chance. One boy said, "Yes, but we watch him awfully close that he doesn't get by again with any dirty tricks."

"Well, what shall we do in this case? Can we put Violet out of the game?" The class thought not because she needed the work, but decided she should be penalized by losing all of her spelling points.

Violet was really a nice child and that was probably her first offense and it was her last in that grade so far as the teacher ever knew, and she took pains to watch. But it took several years to restore her to the place she had occupied in the eyes of her classmates. Years afterward one of the children returned from high school and said, "Miss Stevens, you remember Violet Anderson, the girl who cheated in spelling, don't you? Well, she was made an Adelphi member and we were just wondering whether she cheated at that too."

The teacher permitted the contest to continue to the end of the week. In the meantime she had consulted a very wise supervisor who suggested the use of the Horn and Ashbaugh method which causes each child to compete with himself instead of with others. While it made much more work for the teacher in seeing that the checking was properly done, she felt that it paid, for there were no more outbursts and accusations of cheating. The children were just as happy and when the teacher occasionally found a child who had "cheated himself" she could quietly talk to him and make him see the error of his ways without his having

to carry a stigma with him as long as he lived in the neighborhood.
Outstanding features:

1. Competitive device in schoolroom causes child to cheat
2. Accusation of cheating made in public, causing punishment to be made in public by members of class whom pupil had wronged
3. Difficulty of restoring confidence in the child in minds of classmates
4. Device removed
5. Competition between groups replaced by competition with one's self—trying to better one's previous score
6. Watchfulness exercised on part of teacher to see that habit didn't grow

CASE IV:

Guy was a big, lazy, overgrown, overfed lad. He was the kind who is too lazy even to play ball in ball season. He amused himself in the yard by sitting on a bench pretending to sleep and when smaller children came by suddenly sticking out a foot to trip them.

Being large he occupied a seat in the rear of the room. Early in the term the teacher became suspicious of his methods of work as she saw him deliberately copy an answer in arithmetic from a neighbor. He never apparently studied his spelling lessons and yet his papers were always perfect. The teacher watched him carefully and noticed that whenever she pronounced a word he would glance at his blotter before writing the word. At recess she discovered all of the words written on the blotter. Privately she talked to him and tried to reason with him. He promised to do better, but still he presented perfect papers with no study. When discovered in one method of cheating he tried another. He wrote his words on the seat, on his hand, on the rear of his shoe; he hung his study paper at the side of his desk and looked at it, all of which shows that his mind was active in devising schemes to prevent its being used in legitimate ways, and that he was no novice in the cheating game.

The teacher found that his record from the first grade was one of lying and cheating. The boys didn't care to have him play with them because he spoiled the games and never "played fair." He was callous to punishment.

The teacher felt the hopelessness of the situation but realized that he was fixing these bad habits more and more firmly so she determined to get a few honest pieces of work from him even at a sacrifice of her outside time.

She told him in a quiet talk that hereafter he was to do all of his individual written work under her supervision after school hours and that it was to continue until he was willing to guarantee

his school work as strictly above reproach. His parents were consulted and were willing that his beloved paper route be sacrificed.

He applied himself to his tasks when he realized that parents and teacher had joined forces to make him honest. He proved that he could get his lessons when he wished. This continued for several weeks and finally he said one night, "I'd like to take my work with the class tomorrow." The teacher said she would try him, but that she would certainly not give him many chances. She moved him to the front of the room and watched him. For the rest of the term she detected no more dishonest practices. That does not mean that he was cured, because his brain may have manufactured other ways of saving labor. It does mean that the teacher did all in her power to keep him from extending and fixing a dishonest habit while he was under her care.

The last she heard of him he had been arrested for stealing automobiles, distributing and selling their parts.

Outstanding features:

1. Child cheats to avoid work
2. Is experienced and hardened in cheating
3. Drastic measures used
4. Prevents a continuance for time being, but cure not lasting
5. Boy becomes a criminal later, although teacher could feel she had done her utmost to prevent it

PROBLEMS DEALING WITH LYING AND DISHONESTY

CASE I:

Max was an only child who had every attention at home. He missed this at school and tried to place himself in the spotlight there by telling the other children about the wonderful things he had at home. Everything they mentioned he had, and more.

During the lesson periods it was the same. When the class was studying sections of the United States, Max had an uncle in almost every state. When the discussion led into city government, Max had relatives in every department.

Of course the teacher noticed this and one day when he had placed several uncles in Europe, she said, "Max, you must have a large family of relatives."

The children immediately helped her.

"Yes, he knows someone everywhere."

"My mother says she thinks Max hasn't so many uncles."

The teacher then said, "Let's see if we can remember all of the uncles of which Max has told us."

They found that he apparently had at least nineteen uncles, fourteen aunts, and forty-two cousins.

During all the time they were counting up his relatives Max was growing more and more uncomfortable, but when asked if the number were correct he said, "I'll ask mother to count them and let you know tomorrow." The class was content to wait until the following day.

That evening when the class passed out Max remained at his desk. The teacher was surprised and asked:

"Well, Max, did you wish to see me privately about something important?"

He broke down and sobbed aloud. "Oh, Miss Morris, I can't tell my mamma I have so many relatives. I really have only two uncles, three aunts, and five cousins."

"But, Max, why have you told us you have so many?"

"I don't know, but I'm awfully sorry. I'll never do such a thing again."

The teacher was wise. She knew that he did it to seem important and probably also to cover his lack of knowledge of arithmetic.

"But what are you going to tell the children tomorrow?"

"I don't know."

"What do you think you ought to do about it?"

"I think I ought to say that I wasn't truthful about my relatives and say that I'm sorry I told them fibs."

"Max, I think that would be the right thing to do if the children ask about it. Since you have promised never to exaggerate again I shall not ask you myself and maybe the children will forget to ask."

"Do I have to tell Mother?"

"Not unless you wish, but I hope you will do so."

The next day a cordial note came from the mother thanking the teacher for the kindly way in which she had dealt with her erring son. She said he was so restless after going to bed that she went to him and asked what the matter was. Of course he had confessed and was properly forgiven, but his mother had persuaded him to make a clean breast of it before the children brought up the matter. She asked that he be permitted to do it during morning exercises.

The children accepted Max's apology and a week later expressed their confidence in his future integrity by electing him president of their little student-body organization, in which position his desire to be honored could be realized without resort to subterfuges he had previously been accustomed to using.

Outstanding features:

1. Child made inaccurate statements to exaggerate his own importance
2. Made to see the folly of it by group and teacher
3. Given an office in which he could feel important without dishonesty

CASE II:

A large field-meet was in progress. Since the boys had no dressing rooms they had changed to their track suits in the boys' lavatory. They had left their clothes in heaps upon the floor. When the meet was about over two boys rushed to the field and reported to the teacher in charge that the boys' clothes were all soaking wet and had been tied in knots. She found the report to be true. It took some time to wring the water from the clothes and untie the knots.

Of course there was much righteous indignation on the part of owners of the clothes as they had been busy defending the honor of the school in sports. There seemed to be no clues that evening as to the culprits. The next morning all of the boys of the sixth grade were called in to the principal's office. The younger boys said that the captain of their rival team had been seen in the vicinity of the lavatory. One of the boys who had reported the damage was absent but the other retold his part of the story. As a whole it pointed to leaders from the rival school. In the meantime reports came from teachers who had overheard several conversations in the yard. One boy had said, "I know Tom and Fred did that because they said they were going to 'eat raw beef.'" Another said, "I'm going to beat Tom up. I know he did that."

Tom was one of the boys who had reported the deed.

The two boys who held such opinions were questioned individually and suspicion pointed directly to Tom and Fred. Then Tom was questioned but he made a direct denial that he had had any part in the affair. Several hours later his teacher in a heart-to-heart talk with him got his complete confession because she told him of her confidence in him to tell the truth and lift the stigma from our school. In his confession he said that Fred had thought it up and that he had joined in "just for fun." When Fred returned he agreed that he had thought up the idea. Both boys saw that it was wrong to allow blame to be cast upon others. They made a complete confession and the matter was dropped.

Outstanding features:

1. Two boys play a trick which results in more actual damage than they had anticipated
2. Allow suspicion to rest on others to save themselves

3. Through careful following up of clues suspicion centers upon the culprits
4. By appealing to the best in the lads a confession is obtained
5. Satisfaction attained through confession to classmates

CASE III:

Romero was flag monitor. This important person had the responsibility of unwrapping the flag each morning, holding it during the flag salute, and then placing it in its holder. Each evening it was his duty to wrap it up for the night. Romero was a poor Italian-born lad who added to the family income by selling papers each morning and evening. But he was a true American and loved his honorable position as flag monitor! He was also quick-tempered and a fighter.

The flag was of silk and was especially loved by the children most of whom were foreign.

One evening after school as Romero was taking down the flag a boy thoughtlessly gave him a slap on the back. Romero evidently resented this, dropped the flag, ran after the boy and punished him well. But when he returned to his duty he found that the flag had fallen across an open inkwell and of course was ruined. Romero said nothing to anyone. He rolled the flag up while the ink was wet thus making more spots, and left hurriedly. The next morning he brought the flag to the teacher and said, "Look here. Some guy must 'a' done this to the flag!"

She said, "Why, it is ruined. Were the spots there when you put it away last night?"

He lied beautifully and said, "No, Miss Swann." But the teacher noticed that he didn't look straight at her and that he wasn't as happy-looking as usual. When the children assembled she showed them the flag and asked if they could help Romero solve the problem of how the spots came upon it. No one seemed to know anything of the matter so she asked, "How many were in the room last night when Romero was taking care of the flag?"

There were only three there so she asked them to remain at recess when they could discuss the matter freely. She asked them whether they had seen Romero take down the flag. Of course the story came out of how Romero had chased the boy who hit him. When asked what he did with the flag when he ran after the boy, he confessed that it had fallen down. The rest of the story was sobbed out.

The teacher, being wise, excused the other three children and then asked the child why he hadn't told her the truth in the morning. He had lied through fear. He was afraid his father would find it out and beat him; he was afraid he'd have to pay for

the flag and knew he couldn't; and he was afraid his teacher wouldn't like him any more. She helped him to see how much better it would have been if he had done the right thing, how much easier it would have been to settle the matter. She sent for the boy who had hit Romero and told him that she felt he was just as much to blame as was Romero. She asked them what they could do about it. They both felt they should pay for another flag, but didn't know how they could do it.

The teacher did know. There were many little things to do about the school that the teachers were glad to pay for. She arranged that they do many little errands until the money was obtained. She herself bought a new flag to replace the ruined one and of course the boys were never allowed to repay the whole cost although they thought they did.

Outstanding features:

1. Child lied through fear
2. Teacher made it possible for child to do the right thing

CASE IV:

There is the habitual liar, the child who would rather lie than tell the truth. In a case of this kind the only thing that can be done is to be continually watchful to see that all statements made are checked up either by the group or by the teacher. Sometimes the realization of what it means not to be believed even when one tells the truth causes a change for the better to be made. If a teacher should see that the child is really attempting to be truthful, then she must be wise enough to make most satisfying these attempts.

A teacher should try to make the untruthful child like and respect her for often through a mere personal desire to please the teacher a child may make an effort to be truthful.

PROBLEMS DEALING WITH SPORTSMANSHIP

CASE I:

There was a contest in arithmetic being held between two groups of a sixth-grade class. The groups were evenly matched and for several days first one side would win and then the other. But finally one side began to gain over the other. The losers were not good sportsmen; at recess time they began to accuse the winners of cheating and threatened to "beat them up." The leader of the losing side did strike the poorest worker in his group, telling him that if "he'd get a move on himself" he'd not cause his side to lose.

The situation became so acute that during the race the teacher

saw the leader of the losing side shake his fist at a member of his group who had just lost a point. The teacher thought the time was at hand for a discussion of good sportsmanship, so she began.

"Let's stop for a few minutes. For several days I've had the feeling that arithmetic races are not good for us."

The children looked blank and very much disappointed for they enjoyed this period more than any other.

"Don't you know why I have such a feeling? Think hard! You usually are clever enough to answer my questions."

One child volunteered, "You think we don't like races." Another suggested, "We are too noisy." Still another, "We are careless in making our figures on the board."

The teacher replied, "No, those are mere trifles. My feeling comes from something far more important than anything you have mentioned.

"Do you know what my chief concern for you is? No? Well, I'll tell you. I care most of all about what kind of boys and girls you are. You may think I care most to have you know a great deal of arithmetic, and while that is important I am not nearly so much interested in that as I am that each of you should grow into a fine man or woman. I can't allow you to do anything which I feel will prevent you from growing into such men and women. I have the feeling that during our races you are developing traits which are unbecoming to the development of your best selves. Now I wonder whether you can tell me what those traits are?"

A child ventured, "We 'pick on' the children who lose a point." Another, "We are getting 'mad' at each other." Still another, "Ernest says he's going to 'beat Lawrence up' after school because he doesn't know where to put his decimal points in division."

Said another, "I can't work so well when I know a lot of people want me to lose and will 'razz' me when I do."

The teacher now said, "You see, boys and girls, my feeling was right. You, yourselves, are not happy about the outcomes of the races. What shall we do about it all?"

One child, the weakest in arithmetic, suggested, "Let's not have races." Others excitedly cried out, "Oh, we must have them!"

"How many want to go on with the contest?" asked the teacher.

Only one child was not in favor of continuing.

"All but Lawrence," the teacher commented. "Lawrence, tell us why you don't like them."

Lawrence answered, "I never win and the other kids are always making fun of me!"

The teacher then said, "I think the whole trouble is lack of good sportsmanship. What is a good sportsman?"

After some discussion the children concluded that a good sportsman:

1. Always plays hard to win
2. Practices between contests on weak points
3. Takes defeat smilingly
4. Congratulates the winners
5. Is willing to help weaker members of his group if necessary
6. Takes success modestly

When the above conclusions were placed on the board they were applied specifically to the situation at hand with the following result:

1. They were all to do their best
2. They were to keep careful record of their failures and each evening practice to gain speed and accuracy in weak points
3. The losers were to applaud the winners
4. The group leaders were to give special help to weak members with the aid of the teacher
5. There was to be no loud demonstration by winners on school grounds or elsewhere

From that time on the situation improved. The teacher took great care to praise the children's sportsmanship from time to time. She made it seem more important to them by adding it to the list of "subjects" to be marked on their report cards. The term "a good sportsman" now had meaning to them.

Outstanding features:

1. Children were not good sportsmen in contests
2. Sportsmanship defined and applied to own situation
3. Improvement resulted

CASE II:

With spring came the marble pest. All exhilarating games were at a standstill while the boys squatted in groups about marble rings all over the school yard. Soon the poor players began to "squeal" as their marbles were lost.

Of course an edict could have been issued to the effect that the boys could not play "keeps." But after such an edict comes policing to see that the law is obeyed, and even then "no keeps" on the school yard will not assure that the same law holds outside as well. Then, too, when half the mothers spend their afternoons playing for prizes at card parties, is such an edict fair?

It seemed that the only course to follow was to try to build up an attitude against "keeps" among the boys themselves. A meeting was held at which all the boys from the third grade through the sixth were present. The situation was briefly stated—that some action would have to be taken in regard to the marble

question. Already some of the boys were complaining of losing their marbles to better players.

The teacher asked for suggestions from the group and received three solutions which were listed upon the board:

1. That marbles be eliminated from the games
2. That teams be formed of players of equal ability so that no boy would be pitted against another boy of superior ability. Thus unfair advantage would be eliminated
3. That teams be organized in each grade, contests held under teacher direction, and the winners pitted against one another. The final contest would be between winners in each grade. The winner would receive an appropriate certificate of some sort for his prowess and skill. (This last solution was suggested by a physical-training director.)

Each suggestion was discussed thoroughly and finally the matter was put to a vote. The third carried by a large majority.

Teams were organized and in two weeks the marble craze was over for the year except that occasionally a group of small boys could be seen playing marbles.

Outstanding features:

1. Marble time with attendant evils descended upon the school
2. Difficulties arose
3. Group meeting of boys called to discuss the overcoming of difficulties
4. Common procedure agreed upon
5. Interest allowed to run at white heat for short time
6. Craze soon over with a minimum of "keeps"

PROBLEMS OF TALE-BEARING

It is a real problem to know just what to do in the case of tale-bearing. So often teachers use such harsh measures that strong attitudes are built up against "telling" and later valuable evidence cannot be secured when needed. The teacher should strive to teach the children to discriminate between the problems they can settle for themselves and those with which they need adult help.

CASE I:

A teacher in a certain district school was annoyed continually by children running to her with tales such as, "Miss Slyde, Johnny tripped me;" "Mary hit me;" "Sam threw a rock at me;" "Jane took too big a bite of my cake."

At first she tried to check each tale and mete out due punishment to the offender, with the result that tales increased daily.

She spent so much time running in and out of her room during the noon hour that she decided to eat outside with the youngsters. When she was once outdoors, matters seemed to improve. Finally the thought came to her that the children never seemed to do anything during the noon period but stand around and tease one another.

With little trouble she organized games. With the children's aid she gave "pie suppers" until they could afford some playground equipment. Sand was hauled from the river for the use of the younger children. The whole playground teemed with life.

Within a few months the children's satisfaction resulted from wholesome activity instead of in some other child's discomfiture. As the teacher had directed their interests into worth-while channels there were few tales told.

Outstanding features:

1. Teacher constantly annoyed by tales from the playground
2. Teacher stayed with children—found cause of petty tales
3. Interested them in worth-while activity
4. Tales were forgotten

CASE II:

The children in the fourth grade had a habit of tattling. In order to break this up the teacher decided to try to establish a system of self-government by which the children would learn to distinguish between things worthy of notice and the trivial.

The children liked immensely the idea of managing their own affairs and elected a president, vice-president, secretary, and two traffic officers. It was the duty of all officers to see that the laws which they had drawn up for their living together peaceably were obeyed, although the traffic officers alone were to report the misdemeanors at the weekly meeting. The teacher, as a member of the group, had the right to advise, but it was a relief to her to be able to say to a tale-bearer, "Just tell that to your traffic officers."

At the first meeting there were a number of small offenses, so many in fact that one child arose and said, "I think it is silly for a traffic officer to pay any attention to some of those things. I know that James and Henry were just wrestling for fun and when James got hurt it was as much his fault as it was Henry's." Others thought so too.

The teacher said she thought that the traffic officers really ought to weigh carefully each offense before bringing it before the meeting in order to see if it were really worth while. She suggested that the officers read again the offenses and allow the group to discuss the seriousness of each. They ruled out such things as cap-snatching; chasing one another; wrestling in fun; accidental

pushes, slaps, and bumps. They felt that these were important: not taking proper turns at games; calling one another bad names; squirting water on the girls; grabbing lunches; and stealing money.

As the meetings were continued the offenses became fewer. Rarely were things brought to the teacher between meetings, and then only really serious matters. The club seemed to solve the tattling problem.

Outstanding features:

1. Children great tattlers
2. Self-government club organized
3. Group learned to discriminate between things worth telling and those best forgotten
4. Tattling reduced to minimum and the right attitude toward giving evidence built up

PROBLEMS OF STEALING

CASE I:

Dick was a very bright ten-year-old boy whose mother and father both worked. They were never at home when he returned from school. Naturally he turned to the streets for amusement.

One evening he and a few other boys were playing ball. Quite accidentally they broke a very expensive plate-glass window. The boys were frightened but decided among themselves to offer to pay for the window which the owner said would cost each boy three dollars.

As most of the boys came from comfortable homes where the mothers didn't go out to work it was not hard for them to secure the money. With Dick it was different. He postponed telling his parents until the owner of the broken window threatened to inform them himself. The result was all he had anticipated. His father gave him a good beating; his mother sent him to bed without his supper. Both parents told him that he would have to earn the money to pay this debt. Most parents would have advanced the money and made possible the opportunity for him to pay it back. Not they!

Dick tried to sell papers but the older boys forced him to the unprofitable corners; he offered to mow lawns but was too small; he went without his lunch and saved a dime a day, but in the meantime the owner was threatening him with jail if he couldn't pay.

It was at this time that money began to disappear from the teacher's pocketbook and from other children's desks. Every day for two weeks the usual calm of the room was disturbed by thefts.

The teacher gradually began to wonder why Dick was about so much. It wasn't customary for him to stay indoors. Finally one morning before school the music teacher laid her gold pencil down on a desk for a few minutes. When she returned for it, it was missing! Only three children had been in the room at the time she had laid it down and Dick was among them.

Nothing was said to the children about the theft, but because the teacher suspected Dick she stood near him as he worked his arithmetic problems. She noticed that he was nervous and that his mind wasn't upon his work. His left hand frequently patted the outside of his left coat pocket. The teacher stood directly over him, letting him feel that he was being watched. She caught a gleam of gold in his pocket and then quietly asked him to come outside with her. He obeyed, but was white and trembling with terror. When they reached the anteroom the teacher said quietly:

"Dick, Miss Sears is looking for her gold pencil. Will you please give it to her?"

He saw that he was caught, and obeyed instantly.

When the teacher questioned him about his reasons for taking the pencil the whole miserable story came out. He had to have money and had no way to get it. He brought back all he had taken. The teacher called upon the owner of the window, who proved to be an understanding, sympathetic man. He agreed to wait until the money could be honestly made and even suggested ways of earning it. Odd jobs were secured for Dick at school and in a few weeks he was beginning life anew with a clean slate.

It was after the money was returned that the parents were cautioned as to the dangers of dealing too harshly with young offenders. They were the kind who were glad to shirk responsibility, but Dick was helped over one hard place successfully.

Outstanding features:

1. Child of unsympathetic parents stole because he had to have money and had no way of getting it
2. When caught he was helped to raise the amount needed
3. Child found happiness in doing right

CASE II:

Josephine was a meek-looking little child who seemed very shy. Her eyes were continually shifting and all her movements were sly. She never played with the other children if she could help it. She preferred to stay around the halls or the schoolrooms.

One day a valuable vanity case belonging to the teacher was missing. It had last been seen on the limb of a tree where she had hung it during physical education. The matter was seriously discussed and all of the children searched for it but to no avail.

During the afternoon recess, the teacher began to search the desks of the children. To her surprise she found her coin purse hidden under the books in Josephine's desk. She left it there and when the children came in she said:

"Boys and girls, I think maybe we could find my case if we will all search in our desks. I have an idea that someone in here knows about it."

The children had a general house-cleaning. The teacher watched Josephine carefully searching around this purse. She determined to give the child a chance to confess so she said: "Now, I am going to step out into the anteroom and one by one I shall call you out. You are to tell me what you have found."

It disappointed her when Josephine declared she had found nothing. Then to Josephine's surprise she said, "I know you have my purse. I found it in your desk. Tonight after the others have gone you are going to tell me where the vanity case is and we are going to get it."

Josephine confessed that she took the case, removed the coin purse and gave the rest to an older brother to take home at noon. She had told him to tell her mother she had found it. The teacher accompanied Josephine to her home where she met an over-worked, tired mother who kept a boarding home for children. She said that Josephine had inherited her father's knack for "finding things"—that nearly every day she came home with something she had found.

The mother was made to realize that her daughter had stolen the articles and next day saw to it that Josephine returned a wagonload of parasols, beads, lunch boxes, pencils, sweaters, etc., that she had taken. She was given a spanking and a serious talk. Both mother and teacher watched the child carefully afterward and neither ever again found cause to complain.

Outstanding features:

1. Child wanted things she didn't have
2. Stole them and told mother she had found them
3. Mother too lax
4. Child was caught and punished
5. Careful watchfulness on part of teacher and mother prevented establishment of habit

CASE III:

The only child of doting parents who had separated; there was no reason for Dorothy to steal anything. She had paper to waste but she delighted in stealing that of her neighbors. She was given twenty-five cents to spend as she pleased every day, yet she took money from other children. She boasted of having twelve

dolls; nevertheless she helped herself to one belonging to another child. She became the "master mind" and bribed a little colored girl to steal for her.

At the time of her greatest activity she was living with her father whom she really loved. After each episode she was made to replace what she had taken and was punished in various ways, but nothing had any lasting effect. Finally the father was called in. At first he did nothing more than unintentionally help Dorothy make up a story blaming another child for her fault. Later he became convinced that there was something radically wrong and aided the teacher in her efforts.

Spankings, fatherly talks, or other similar methods had no effect—but the threat of taking her away from her father had. When appealed to on the basis of grieving her father and having people think her father shouldn't have her, she promised to do better. Later when she was entrusted to sell tickets for a school entertainment the money became a bit entangled, but after that she had no more trouble.

Outstanding features:

1. Child stole for the satisfaction it gave her very active mind
2. Ordinary punishments failed to cause improvement
3. Love of father used to awaken in her a desire to do better

Corinne A. Leeds

Milo B. Hillegas

ROUTINE AND RECORD FACTORS IN CLASSROOM MANAGEMENT



By

EDWARD S. EVENDEN, Ph.D.
Professor of Education
Teachers College, Columbia University

ROUTINE AND RECORD FACTORS IN CLASSROOM MANAGEMENT

“I DON’T see why we should be expected to make out all these reports.” “It’s getting so that I have to take time every day for some kind of record or report.” “Why, last month it took me two whole evenings to make my report for the month balance!” “There is altogether too much ‘red tape’ in school work now.”

These or similar statements may only too frequently be heard in the conversation of teachers. The term “red tape” has become an expression of impatience and even contempt when applied to routine elements in governmental affairs, business transactions, or school administration. It is most frequently applied to matters about which the user is poorly informed.

A more thorough knowledge of the red tape features of a situation usually reveals the fact that they are concerned with records which are either necessary or very desirable. A teacher ceases to resent the red tape in her work only when she recognizes that the reports which she is asked to make are necessary for the effective operation of the school system of which her work is only a part—even though it is an essential part. When she sees some significant change made in the curriculum, in the methods of teaching, or in the organization of the school as a result of the records of a year’s

work, she realizes that the reports which she makes are needed, that they are used, and that they must be absolutely reliable. Once a teacher realizes these three things about her recording and reporting duties, she no longer refers to them as red tape or resents the time consumed in performing them.

ROUTINE AIDS HABIT FORMATION. Regardless of what theory of education a teacher follows or what kind of educational psychology she uses, it is impossible for her to ignore the laws of habit formation in her teaching or in her management of the classroom. Habit is the great emancipator of physical and mental energy. Activities which become habitual are accomplished with less effort, more quickly, and more accurately. It is unquestionably one of the greatest tasks of the school to see that children either provide themselves or are provided with a large number of useful habits. It must also see that other undesirable and wasteful habits are not formed, or, if formed, are not retained, because such habits may very easily become tyrannical captors instead of liberators.

The "routine elements" in classroom management are those that are so frequently and so unvaryingly performed that they should be reduced to habits, and they are not done in a routine manner until they are habits. The laws governing the making of classroom procedures into elements of routine are the laws of habit formation. These laws are variously stated¹ but they all imply, if they do not specify, the following steps:

1. A definite and clear knowledge of the thing to be done.
2. A desire to do it in the best or most approved way.
3. Enough unvarying repetitions to secure the desired degree of accuracy and speed.
4. Consistent "up-keep practice."

¹W. C. Bagley, *Classroom Management*, chap. i, p. 16. New York: The Macmillan Co.

William James, *Psychology*, Vol. I, chap. iv. New York: Henry Holt & Co.

Edward L. Thorndike, *Educational Psychology*, Vol. II, chap. iii. New York City: Bureau of Publications, Teachers College, Columbia University.

As a teacher gains in experience she either consciously or unconsciously formulates a list or inventory of desirable habits and a black list of undesirable ones. It is her duty at the beginning of her work with a new group of children to make a careful study of the habits of the individual children and by checking against the "master lists," just referred to, make a program of habits to be formed.

This program should list first the habits which the whole class should form and then those needed by each individual pupil. These lists should be checked at least once a month with some such symbols as *NP* (no progress), *P* (progress), and *S* (satisfactory). Experienced teachers often claim that they can make this check-up without the aid of a written list. Such teachers will be surprised and gratified at the improved results they will secure if they take the few minutes necessary to do this with a written list.

ROUTINE IN CLASSROOM MANAGEMENT

This section is primarily concerned with the routine elements which should be firmly fixed as habits by the pupils and by the teacher. It does not seem desirable in this discussion to make any sharp distinction between the routine of the pupils and of the teacher. They are both involved in all routine matters since all school routine must have its ultimate justification in its contribution to the pupil. If the teacher forms the habit of observing the temperature of the room or of adjusting the window shades, it is justified in its contribution to better working conditions for the pupils. If the teacher perfects a system of correcting written work which saves her time, it is for the purpose of giving her more time to devote to the work of teaching, not merely that her day's work may be shortened.

CRITERIA FOR DETERMINING ROUTINE. Young teachers particularly should have some guides or criteria by which they can determine which elements of the day's work should be made matters of routine and which should be left for indi-

vidual adjustment. A few simple statements will serve as a guide although there is not now enough agreement on this whole question to justify calling any of these statements either principles or laws. A teacher might well ask herself, with regard to any habit under discussion, some or all of the following questions:

1. Is the habit socially desirable? Will its presence in the majority of individuals make a definite contribution to the welfare of the social group? Is the habit individually desirable? This is a corollary question and one that is often hard to distinguish from the first. Will the formation of the habit free some of the individual's time and permit a greater degree of self-expression? If it does it is of course desirable for the individual and also for the group of which the individual is a member.

2. Does the habit provide for a saving in time without a loss in accuracy?

3. Does the habit provide for a saving of money or materials?

4. Does the habit facilitate the existing and approved plan of school organization and administration?

5. Does the habit contribute to the immediate safety of the group in an emergency?

If some or all of these questions about an element of routine can be answered in the affirmative, the teacher is justified in making it an habitual procedure. It will be seen, of course, that the above criteria should be revised from time to time by each teacher.

How to use criteria. An illustration will make clear the value of these criteria. For example, a sixth-grade teacher wonders whether she shall dismiss the class by counting "One" (pupils sit straight in seats); "Two" (pupils turn in seats and face the aisle); "Three" (pupils stand and face the front of the room); "Four" (pupils pass in an agreed-upon order to the door).

Is such a procedure socially desirable? The answer to the first question must certainly be negative. Such a method of

dismissing a group is never used by a hostess after a dinner, nor by a minister after a sermon, nor in any other situation except the schoolroom. Besides establishing a routine which will be useless after school it denies the pupils the opportunity to practice leaving gatherings in an orderly manner. Is the habit individually desirable? This is answered in the negative for the same reasons that were given in answer to the first question.

Does the habit provide for a saving in time? It may at first but later teachers are very prone to wait between counts until all rows are straight and each pupil is in *exactly* the required position. The system then takes more time than will be used by the pupils in the natural method of dismissal after they have learned through experience that haste and crowding during dismissal only serve to delay and inconvenience them.

The third criterion does not apply to this element of routine.

Does the habit facilitate the existing and approved plan of school organization? If the school is managed on the basis of military discipline and the children are marched in and out in a regular order it might be desirable to get them lined up at the door in the above-described manner. Even in such a school, however, a teacher who desires the more natural method will find that she can soon trust her class to be at the door in time to join the procession.

Does the habit contribute to the safety of the group? The possibility that it may be a part of the fire drill is the only argument for it and this is more than offset by the double argument that the fire drill may not even use the regular means of exit, and that it makes the safety of the class very dependent upon the presence of and the presence of mind of the teacher.

If a teacher will take the time to ask these questions about some plan she intends to inaugurate, she can usually make an easy decision concerning its value. In cases where some of the criteria favor a procedure and others oppose it, the teacher has been forced at least to analyze the problem more thor-

oughly and can undoubtedly make a better decision because of that analysis.

ROUTINE WHICH IS SOCIALLY DESIRABLE. Social desirability is used here to indicate traits or characteristics which are approved by society even more than it is used to indicate the refinements of speech and action which usually characterize "polite society." For example, society would approve the development of the habit of self-reliance on the part of all pupils. Along with it should go the willingness to accept responsibility for all actions resulting from the individual's initiative. Many items of classroom routine assist in developing these habits and an even greater number prevent their formation.

When pupils must secure the teacher's permission to sharpen their pencils, leave the room, consult the larger dictionary, secure a reference book, or do any of the many other things which pupils will need to do during a day there is little opportunity for the exercise of initiative or self-reliance in such matters. Later in life the individual who has not had any practice in making decisions for himself in these minor matters will waste much valuable time in unnecessary debate over trifling adjustments. Under this group also should be considered the early establishment of desirable manners and methods of address. A few specific examples are given in the following paragraphs.

The salutation "Good morning, Miss Johnson" made by individual pupils who come to the room before school or who approach the teacher with any particular request, should be substituted for the formal ritualistic wait for attention and then the feelingless "Good morning, children" and the mechanical response in unison, "Good morning, Miss Johnson."

The servile and un-American "Yes, ma'am," "No, ma'am," "Yes, sir," and "No, sir" should be abolished in favor of the more desirable "Yes, Miss Johnson" and "No, Mr. Brown," or for the more desirable complete answer such as, "Yes, Miss Johnson, I will be glad to make a special report on that

topic," or "I'm sorry, Miss Johnson, but I forgot that it was part of the assignment."

All development lessons and most recitations would be taught more efficiently if children were asked not to raise their hands after each question is asked. Where this is not checked it rapidly develops into a calisthenic exercise with frantic waving of arms and even snapping of fingers. Imagine how conspicuous the individual would be in whom this habit was firmly fixed if, in later life, he attended a lecture, forgot for the moment that he was not in school, and in response to a rhetorical question from the speaker climbed half over the seat in front of him and vigorously waved his hand to indicate that he would like to attempt an answer. The raising of hands in class work is useful for securing expressions of opinion or votes. Practically no other use is justifiable as a routine procedure.

Another habit in this group which should be firmly fixed is the one of not interrupting while another is speaking. This should apply not only to interruptions of the teacher when she is speaking but to interruptions of other pupils.

These examples will show the value of applying the test of social desirability to the matters of ordinary classroom routine.

ROUTINE WHICH SAVES TIME. Under this heading may be considered the routine which saves both the pupils' and the teacher's time. This test should always be applied with the saving clause "other things being equal," because saving a few minutes' time is not justified if the saving necessitates the establishing of a useless or undesirable habit. The teacher who applies this criterion wisely must have imagination and educational perspective enough to see beyond the immediate present. Some typical ways of saving time will assist the teacher in the application of this standard.

In all exercises where the class recites as a group the following routine should be followed: (a) have all the necessary working material ready for distribution; (b) have material distributed by monitors; (c) secure attention of all members of

the class; (d) begin on time; (e) make sure that *the work* is holding the attention of all of the pupils; (f) close on time.

One way to save time in the typical school is to prevent the waste of time. This can be accomplished in many easy ways but chiefly by establishing certain school or room traditions which encourage pupils to work during work periods. For example, it is easy to teach pupils that they are to be held responsible for the things said by other children during a recitation as well as for the statements of the teacher. This will save the wasteful, though very common, repetition of pupils' answers by teachers. A phase of this same suggestion is teaching children that when a part of the class is sent to the blackboard for work the remainder of the class is expected to do as much work as those at the board.

In asking questions during a recitation, better attention is obtained and much time is saved by waiting after the question before calling on a pupil to answer. In this way every child has time in which to formulate mentally the answer which he would make if he were asked to recite, and then to check his answer with the one made by the child who is called upon.

A further saving of time is effected if the teacher establishes the habit of asking her questions only once and in only one form. She should also have it generally understood that recitations should not be interrupted by questions from other groups in the room and that recitation time will not be used for coaching one or two pupils, especially when their need for special aid was caused by absence from school.

Much time is often lost at the beginning of a term by the teacher's failure to learn the names of the children. An easy way to overcome this difficulty is to prepare a simple seat chart to be used during the first week or two of the term. This can be made upon a small piece of cardboard (the back of a tablet will do) ruled into blocks which correspond to the rows of seats and the number of seats in each row. The names of pupils should be entered in the space corresponding to the seat occupied. The card can be leaned against some

object on the teacher's desk and the teacher can at a glance get the name of the boy in the third seat from the front of the room in the row nearest the windows. This scheme is as effective as some of the more elaborate ones for learning the names of pupils, and it takes only a very few minutes to prepare.

One of the problems which involves the wasting of much time is that of "leaving the room." This is a matter which should not take any actual time from the teacher but it is one over which she should always retain general supervision. The best way of solving it is to reduce the time so lost to the least possible amount by encouraging children to care for such matters during the periods before school and during recess. The following procedure has been found most satisfactory for handling the cases of leaving the room which are necessary during the school periods:

1. Have it clearly understood that only one child at a time may be out of the room.

2. Have each child who needs to leave the room go without asking special permission of the teacher. (If children are not accustomed to this they may abuse the privilege at first, in which case the teacher must keep a close watch on it and perhaps make the persistent repeaters make up lost work at some other period of the day.)

3. Have each child who leaves the room write his name upon the blackboard near the door. He should also write the time at which he leaves the room and the time at which he returns. This will serve several purposes. It will let the children know that there is or is not a child already out of the room. It enables the teacher to know the length of time children are out and which children, if any, are persistent offenders in this matter. Occasionally at irregular intervals the teacher should make or have made a copy of the list of names on the board for a period of several days. A simple tabulation of these will show whether some child is leaving the room regularly at a given time. Where this is noticed the teacher might do well to compare her list with similar lists

from other rooms. This will often show that agreed-upon meetings between two or more children from different rooms are being held. Such meetings are never desirable and especially where the lavatories and toilets are not under constant supervision.

Whenever the teacher is compelled to stop her work long enough to answer such questions as "Miss Johnson, may I speak to Susie about the history assignment?" there is a loss of momentum and interest as well as an actual loss of time for the class. Even though the question and answer take less than a minute it becomes a more noticeable item when this is multiplied by the twenty-five or thirty pupils, each of whom loses that much time. This lost time may all be saved by training children to ask such questions in a quiet, undisturbing manner without first asking the teacher's permission. The teacher can easily tell when the privilege is being abused and she should withdraw it from those individuals who so abuse it.

There are many ways in which monitors may be used to save time. They may take the roll call, distribute materials, collect written work, and distribute corrected test papers. Also, a desirable type of cooperation is provided if the teacher works out some system whereby all the children have a chance to help at some time. Some teachers prefer to appoint monitors just for the specific task at hand, but this takes more time than the monitors save. Some teachers always select the pupils in the front or in the back seats. Obviously this does not give all pupils an opportunity to serve. Some teachers make the appointment to monitorship a reward of merit in scholarship or in deportment. In the writer's judgment this is not wise because often the "bad" child or the "slow" child will cooperate better if he has a chance to feel that he is an active member of the group. He may not get that chance on the merit basis.

Another way of saving time is to devise a method by which papers that are to be returned may be collected in such a way that the monitors may return them in order as they pass

down a row and thus avoid the waste of time which comes from hunting through a pile of papers for the one to give out. This can be done very easily by having each monitor collect the papers in the same order for each row. Valuable time can be saved and much valuable instruction can be given by having as much as possible of the written work corrected in class. When this is done the paper should bear the name of the pupil who corrected it, so that occasional checks can be made of the accuracy of such work. In this work it is best to have the correcting done by pupils who are two or three seats removed from the pupil whose paper is being corrected. This makes it impossible for a child to watch the pupil who is correcting his paper and keeps his attention more firmly fixed upon the task of correcting the paper for which he in turn is responsible.

These are some of the most common elements of routine which involve the saving of time, and the discussions of them will help the teacher of limited experience to determine the desirability of other classroom routines to which this criterion applies.

ROUTINE WHICH SAVES MONEY. This heading is one which makes an immediate appeal to the taxpayer but in reality it is involved but slightly in the ordinary classroom procedures. Of course any saving in time, as discussed under the second criterion, also saves money, since it saves instruction time which must always be considered as the most costly item in school operation.

Practically all of the routine phases of classroom procedure which are concerned with financial economy involve the care of the physical plant, the furniture, or the instructional equipment. The proper care of these items is more a matter of good instruction in matters of respect for property, neatness, cleanliness, and other such characteristics than it is a matter of routine. However, certain routines will assist in the establishment of proper habits.

There should be regular inspections of desk tops by a committee of pupils. The same or another committee should

make regular inspection of desks for orderliness and for the treatment of books—particularly if the books are furnished by the schools. In all schools in which textbooks are furnished by the school district there should be regular inspection of textbooks to prevent mistreatment and destruction of this form of property.

Waste-paper baskets should be passed at stated times in order that paper will not fall or be thrown on the floor and thus cause an extra expense for janitor service. For the same reason, as well as for health and sanitary reasons, teachers should see that pupils establish the habit of scraping mud from their shoes in wet weather, before entering the building.

There are other ways of effecting various economies in the management of the school, but care should be exercised to see that a sense of relative values is kept in such matters. The time wasted by having children who are working at the blackboard go about the room to get or wait for one of the three blackboard erasers supplied to the room is often more valuable than the money which would be needed to supply two or three erasers for each child in the class.

ROUTINE DEMANDED BY THE SCHOOL'S ORGANIZATION. In all cases where this criterion applies there is really little choice for the teacher except to comply, at least until the organization can be changed. If, for example, the pupils form in lines on the playground and march in to fife and drum and are similarly dismissed, there is no alternative for the teacher who would rather have her class come in informally. The same will probably be true of assembly periods where the grades will march into the auditorium in a regular and unvarying order. This criterion is not involved in many of the school's activities.

ROUTINE WHICH MAKES FOR SAFETY. This group of routines is concerned mainly with safety in times of emergency and protection from unnecessary exposures of health.

The first of these is the more obvious and the more easily cared for by routine measures. It involves protection of the children in case of fire, tornado, earthquake, or similar emer-

gency, and is usually cared for by the so-called fire drill. When the plan for emptying the building is being worked out, consideration should be given to such items as the following: age of the children (the youngest children should be marched out the shortest and the safest way if there is any choice of exits); the use of all available exits; the avoidance of periods of waiting at doors while other classes pass by; and the proper placing of teachers in order to maintain order and prevent panic. Once the plan has been worked out it should be carefully explained and practiced enough times early in the year to fix it in the minds of all the children. After this, drills should be held at irregular and unannounced intervals not less often than once a month. This is one case in which unvarying routine is certainly justified. It should be done each time in the way it is desired in the case of a real emergency. Children should not be allowed to stop even for wraps or books.

With regard to the second phase of this criterion, the method of caring for it is not so definite, at least so far as the teacher is concerned. Every teacher should be familiar with the first and more easily detected symptoms of children's contagious diseases and should make it a habit to consciously survey the room at the beginning of each session for the unusually flushed face, any evidence of a skin rash, or other symptoms which may be the forerunners of danger. Naturally this is not meant to replace the inspection by physicians or by school nurses in schools where such are provided. Instead it is an added precaution.

There are many personal habits which should be formed in order to safeguard the health of the class, such as covering the mouth and nose with a handkerchief when sneezing or coughing; but these are matters of instruction more than they are matters of daily routine, and are taken up in detail in the section on Health in this volume.

CONCLUSION. The entire question of school routine is inseparable from the question of habit formation. When a teacher realizes the time and effort which are necessary on her

part and on the child's part to establish a habit she will always hesitate before she insists upon the forming of a habit which is not permanently useful. When she realizes also that it usually takes more time and effort to break a bad or useless habit than it does to form it in the first place, she will be even slower to introduce into her routine procedures habits which in themselves have no permanent value. The formation of such habits may be regarded as being wasteful in a double sense. In the first place they use time and effort which are subtracted from the time available for instruction. In the second place they waste the time and effort necessary to break the habits after the child finishes school.

Before establishing any classroom routine the teacher should think twice and apply all the criteria possible to it in order to be sure that she is justified in establishing it.

RECORD-KEEPING IN CLASSROOM MANAGEMENT

EDUCATIONAL RECORDS NECESSARY. Education is now one of the most important enterprises of any nation which believes in furnishing educational opportunities for all of its children. When public educational systems were younger it was possible for the administrative officers to know at first hand practically all phases of the work, but this is no longer possible even in the smaller systems. There have been remarkable increases in the number of children and adults served by the schools, in the number of years of schooling furnished, in the variety of educational offerings provided, in the number of educational activities outside the school-room sponsored by the schools, and in the amount and complexity of instructional equipment available. All of these increases have so complicated the work of the teacher and the school administrator that the study of records and reports for some school officials must take the place of the earlier first-hand knowledge.

The public now has so much invested in the schools, both potentially in its future citizen members and in actual money

spent each year, that it insists, and rightfully so, on being given frequent and complete accountings of the work of the schools and of the expenditures of funds. All such reports should be concerned primarily with the work of the classroom, since it is in the classroom that the task for which the whole system exists is being done. If these records of the classroom work are not complete and accurate the report to the patrons is inaccurate, and any possibility for improving the work of the schools by means of a study of the reports is lost.

Relatively few of the records and reports used in a school system actually take any of the teacher's time to prepare, but those few are basic to the whole system of records. Unless the teachers realize the importance of their records and are willing to give their cooperation in keeping them, there is grave danger that the value of all school records will be destroyed.

ROUTINE ELEMENTS IN KEEPING RECORDS. Since school records are so important they should not be based upon memory reproductions of the facts to be recorded. Memory is a wonderful power but it is far from infallible, as will be shown by any court trial in which several witnesses who saw the same incident testify as to what took place. Some teachers place so much confidence in their memories that they do not make the record of absence and tardiness until after the close of school in the afternoon, and if something prevents them from doing it at that time then they have been known to depend upon memory for the attendance record of several days. One teacher boasted to the writer that she kept her attendance register at home and made out her record for the week from memory when she went home on Friday night. It is obvious that it would take very little of such recording to make the whole record system merely a matter of guess-work.

There is only one method of insuring accuracy in a teacher's records and that is to make them one of the school day's routines. Attendance records should be made at a fixed time

each session with the same regularity that opening exercises are held or classes are dismissed for recess. If a teacher wishes to have an accurate record of the class work of the pupils in history, she should take the minute or two needed at the close of the history period to record an estimate of the work of each child who participated in the lesson. This, of course, need not be done after each lesson but can very well be done occasionally for different subjects in order to increase the accuracy of the teacher's general estimates of class work which are too frequently made only once a month when report cards are made out.

WHAT RECORDS SHOULD A TEACHER KEEP? The answer to this question would vary for different countries and for different situations in the same country or even in the same city or school district. There is a growing realization, however, that there should be a much wider agreement upon the records which are desirable and a much greater uniformity in the way these essential records are made and tabulated. Until there is more agreement and uniformity on this matter it will be impossible to make valid comparisons of school systems and thereby enable one system to profit by the discoveries and mistakes of others.

While we cannot give a list of the records which every teacher should keep, we can safely make the statement that most teachers keep many fewer records than they should. If a teacher has a doubt about the value of any of the data that are called for in a report she can easily settle the doubt by asking herself some or all of the following questions about them:

1. Will the facts help any administrative or supervisory officer to perform his duties in a better way? Are they facts that school patrons would be interested to know?
2. Will the gathering of the required data help me (the teacher) to know my pupils better and also to adjust the work of the school more accurately to their needs?
3. Will these facts be of service to other teachers of this grade, to those who will teach these children in higher grades,

or to vocational or educational councilors who may later be called upon to give these pupils important advice, perhaps concerning their life work.

4. Will these facts be of any service to other school systems in the solution of their problems?

If any of these questions can be answered in the affirmative, it is justification enough for recording the data. Teachers will find that most of the facts which they are asked to report will serve all four purposes.

The records that teachers are ordinarily asked to make can be roughly divided into the four large classifications of attendance records, instruction records, physical records, and equipment records. The most important records under each of these headings are discussed individually in the following paragraphs.

RECORDS OF ATTENDANCE. In all school situations where compulsory attendance is in force, the first and most important record in this group is a permanent, continuing census record. This record is not one for which the teacher is directly responsible but it is one to which she should have access and which she should study, since it contains information which will be very helpful in understanding individual children. This record is of course the basis for the enforcement of the attendance laws.

The attendance department or the official responsible for the school census should have a list of all the children in the school district who should be in attendance in each school. The teacher should check the first day's attendance against that list and immediately supply the attendance officer with the names of the missing children. In small schools where there is no resident attendance officer the teacher can get much of the needed information concerning absentees by asking the other children about them.

The teacher should get from all pupils entering the schools for the first time the data called for in the official register which she is required to keep. This should be secured as soon as possible and can be obtained most conveniently by the use

Give names, ages, etc., of brothers and sisters or any other children living in your family between the ages of 5 and 19				
Name	Age	School Attended		

Elementary Pupil's Registration Card				School
To the parent: The information asked for below is needed as a permanent school record of your child				
Date	19			
Pupil's full name				When vaccinated (Year)
Pupil's local address				State or Country
Birthplace: City or town				Age at last Birthday years
Date of Birth: Year	Month	Day		
Sex (Boy or Girl)	Race (White, Negro, Indian, Mongolian)			Nationality
Father's name				Occupation
Residence				Nationality
Mother's name				Occupation
Residence				Nationality
Guardian's name				Occupation
Residence				
This is to certify that the above information is correct				
Date	19	Signature of Father (if living) or Guardian		
Date	19	Signature of Mother (if living) or Guardian		
NOTE: If you have a birth certificate, a passport, a baptismal certificate, or other document giving this child's age it will be helpful if you will send it to the school principal with this card. It will be returned to you.				
STRAVER-ENGELHARDT SCHOOL RECORD CARD SERIES C. F. WILLIAMS & SONS, INC., ALBANY, N. Y.				

FIG. 1. The registration card gives valuable data concerning the pupil

of a registration card similar to the one shown in Fig. 1.¹ This card secures a number of very useful facts about the child, his parents, and his brothers and sisters. Once this material is obtained it is not necessary to ask for it each year. There is a rapidly increasing tendency to use cards for recording school data. They are more adaptable than record books and more easily used. The cards can be distributed to the various officers who make most use of them. This assures more frequent use than when all records must be consulted in one central office.

Teacher's daily attendance report. As previously stated in this chapter all teachers should make a record twice daily of the absences and cases of tardiness. In schools of more than

¹The cards illustrated in this chapter are from the series prepared by Professors Strayer and Engelhardt, Teachers College, Columbia University, and published by C. F. Williams and Sons, Albany, N. Y.

103A											
To be filled out for the pupil in case of transfer to any other school, either in or outside of city.											
TRANSFER CARD											
1. Last name						2. First name and initial					
3. Name of parent or guardian				7. Occupation of parent or guardian				4. Birth			
								Yr. Mo. Da.			
5. Residence before discharge				8. New residence (or name of private or parochial school if pupil is transferred to one)				10. Age when discharged			
								Years Month			
d. Grade		e. Room		f. Days Present		g. Health		h. Conduct		i. Scholarship	
										12. Date of last attendance	
School						j. Days absent		k. Times Tardy		9. Date of Discharge	
Teacher						Principal					

STRAVER-ENGELHART SCHOOL RECORD CARD SERIES "C. F. WILLIAMS & SON, INC., ALBANY, N. Y."

ATTENDANCE AND PUNCTUALITY				
	Days Present	Days Absent	Times Tardy	Days Present
19.....				11.....
September				February
October				March
November				April
December				May
January				June

FIG. 2. On the reverse side of transfer card is given the pupil's record for attendance and punctuality

one room a copy of this record should be sent to the principal each day. This record should be kept upon a printed slip with spaces for the date, school, room number, pupil's name, residence, whether absent or tardy, and a space for remarks. The card should be signed by the teacher. Printed slips will save the teacher a great deal of time in actual writing.

The other attendance records for which the teacher is responsible are admission cards, discharge and promotion cards, and transfer cards. The second of these is used only

when pupils leave school before the end of a term or at the time of promotion. The transfer card is used when children move during the year from one school district to another or from one school to another in the same district. The data usually asked for on this card are shown in Fig. 2.

RECORDS OF INSTRUCTION. These are the most important of the teacher's records because they show what is being done in the most important of the school's functions. The most convenient form for this record is shown in Fig. 3. This card provides the spaces for a daily attendance record and a monthly record of grades in the several subjects and for scores in standard tests. These cards can be filled out with a minimum of writing and yet they make available a group of invaluable diagnostic facts about each pupil, especially when the cards are allowed to accumulate from year to year. Each teacher should have one personal record which would list the names of the pupils and the subjects taught, in order that she may keep a record of class work done during the month. The reasons for this were explained earlier in the chapter.

The pupil's report card is a transcript of the pupil's grades in his school subjects, with a summary of his attendance record. It is not a common practice to include on the report card the pupil's scores in the standard tests nor in group or individual intelligence tests. These tests are usually given primarily for their diagnostic values and not as measures of achievement.¹

Some schools are using very detailed report cards on attitudes and social habits. On these, children are marked on such items as "dependability," "neatness of desk," "ability to get along with other children," "promptness in handing in required work," and similar traits. The systems of marking used show that the pupil has the trait or characteristic "to a marked degree," "to a noticeable degree," "is not noticeable

¹ See *The Classification of Pupils*, p. 85, for a further discussion of the use of standard tests and for additional suggestions concerning instruction records and attendance records.

[illegible]

Elementary Attendance and Scholarship Record

School Year 19__-19__

Pupil's Last Name

First School
Teacher
Date of Admission
Date of Transfer

Second School
Teacher
Date of Admission
Date of Transfer

Third School
Teacher
Date of Admission
Date of Transfer

Fourth School
Teacher
Date of Admission
Date of Transfer

First Name and Initial

Residence

SYMBOLS: T - Transferred
Dr. T - Dropped Temporarily
Dr. P - Dropped Permanently

DATE	A. M.							P. M.							A. M.							P. M.							Days Present	Days Absent	Term Total			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4				5	6	7
Sept.																																		
Oct.																																		
Nov.																																		
Dec.																																		
Jan.																																		
Feb.																																		
Mar.																																		
Apr.																																		
May																																		
June																																		

1st Semester - Days present

Scale of Ranking

A - 90 to 100 %
B - 80 to 89 %
C - 70 to 79 %
D - 60 to 69 %
E - 50 to 59 %
F - 40 to 49 %
G - 30 to 39 %
H - 20 to 29 %
I - 10 to 19 %
J - Less than 10 %

Days absent

2d Semester - Days present

Days absent

Subject	1st Semester												2d Semester											
	C	B	A	C	B	A	C	B	A	C	B	A	C	B	A	C	B	A						
Conduct																								
Effort																								
Personal Appearance																								
Reading																								
Language																								
Spelling																								
Geography																								
History																								
Civics																								
Athletic																								
Writing																								
Drawing																								
Musical																								
Physical Culture																								
Science																								
Hygiene																								
Manual Training																								
Sewing																								
Cooking																								

Remarks

Monthly Average

Examinations

Term Mark

Feb.

Mar.

Apr.

May

June

Examinations

Final Mark

INSTRUCTIONS: This sheet should contain the attendance and scholarship record of a pupil for as many years as it is to be sent from building to building or office to office. The first two columns should be used for the first two years. The third column should be used for the third year. The fourth column should be used for the fourth year. The fifth column should be used for the fifth year. The sixth column should be used for the sixth year. The seventh column should be used for the seventh year. The eighth column should be used for the eighth year. The ninth column should be used for the ninth year. The tenth column should be used for the tenth year. The eleventh column should be used for the eleventh year. The twelfth column should be used for the twelfth year. The thirteenth column should be used for the thirteenth year. The fourteenth column should be used for the fourteenth year. The fifteenth column should be used for the fifteenth year. The sixteenth column should be used for the sixteenth year. The seventeenth column should be used for the seventeenth year. The eighteenth column should be used for the eighteenth year. The nineteenth column should be used for the nineteenth year. The twentieth column should be used for the twentieth year. The twenty-first column should be used for the twenty-first year. The twenty-second column should be used for the twenty-second year. The twenty-third column should be used for the twenty-third year. The twenty-fourth column should be used for the twenty-fourth year. The twenty-fifth column should be used for the twenty-fifth year. The twenty-sixth column should be used for the twenty-sixth year. The twenty-seventh column should be used for the twenty-seventh year. The twenty-eighth column should be used for the twenty-eighth year. The twenty-ninth column should be used for the twenty-ninth year. The thirtieth column should be used for the thirtieth year. The thirty-first column should be used for the thirty-first year. The thirty-second column should be used for the thirty-second year. The thirty-third column should be used for the thirty-third year. The thirty-fourth column should be used for the thirty-fourth year. The thirty-fifth column should be used for the thirty-fifth year. The thirty-sixth column should be used for the thirty-sixth year. The thirty-seventh column should be used for the thirty-seventh year. The thirty-eighth column should be used for the thirty-eighth year. The thirty-ninth column should be used for the thirty-ninth year. The fortieth column should be used for the fortieth year. The forty-first column should be used for the forty-first year. The forty-second column should be used for the forty-second year. The forty-third column should be used for the forty-third year. The forty-fourth column should be used for the forty-fourth year. The forty-fifth column should be used for the forty-fifth year. The forty-sixth column should be used for the forty-sixth year. The forty-seventh column should be used for the forty-seventh year. The forty-eighth column should be used for the forty-eighth year. The forty-ninth column should be used for the forty-ninth year. The fiftieth column should be used for the fiftieth year. The fifty-first column should be used for the fifty-first year. The fifty-second column should be used for the fifty-second year. The fifty-third column should be used for the fifty-third year. The fifty-fourth column should be used for the fifty-fourth year. The fifty-fifth column should be used for the fifty-fifth year. The fifty-sixth column should be used for the fifty-sixth year. The fifty-seventh column should be used for the fifty-seventh year. The fifty-eighth column should be used for the fifty-eighth year. The fifty-ninth column should be used for the fifty-ninth year. The sixtieth column should be used for the sixtieth year. The sixty-first column should be used for the sixty-first year. The sixty-second column should be used for the sixty-second year. The sixty-third column should be used for the sixty-third year. The sixty-fourth column should be used for the sixty-fourth year. The sixty-fifth column should be used for the sixty-fifth year. The sixty-sixth column should be used for the sixty-sixth year. The sixty-seventh column should be used for the sixty-seventh year. The sixty-eighth column should be used for the sixty-eighth year. The sixty-ninth column should be used for the sixty-ninth year. The seventieth column should be used for the seventieth year. The seventy-first column should be used for the seventy-first year. The seventy-second column should be used for the seventy-second year. The seventy-third column should be used for the seventy-third year. The seventy-fourth column should be used for the seventy-fourth year. The seventy-fifth column should be used for the seventy-fifth year. The seventy-sixth column should be used for the seventy-sixth year. The seventy-seventh column should be used for the seventy-seventh year. The seventy-eighth column should be used for the seventy-eighth year. The seventy-ninth column should be used for the seventy-ninth year. The eightieth column should be used for the eightieth year. The eighty-first column should be used for the eighty-first year. The eighty-second column should be used for the eighty-second year. The eighty-third column should be used for the eighty-third year. The eighty-fourth column should be used for the eighty-fourth year. The eighty-fifth column should be used for the eighty-fifth year. The eighty-sixth column should be used for the eighty-sixth year. The eighty-seventh column should be used for the eighty-seventh year. The eighty-eighth column should be used for the eighty-eighth year. The eighty-ninth column should be used for the eighty-ninth year. The ninetieth column should be used for the ninetieth year. The ninety-first column should be used for the ninety-first year. The ninety-second column should be used for the ninety-second year. The ninety-third column should be used for the ninety-third year. The ninety-fourth column should be used for the ninety-fourth year. The ninety-fifth column should be used for the ninety-fifth year. The ninety-sixth column should be used for the ninety-sixth year. The ninety-seventh column should be used for the ninety-seventh year. The ninety-eighth column should be used for the ninety-eighth year. The ninety-ninth column should be used for the ninety-ninth year. The one hundredth column should be used for the one hundredth year. The one hundred and first column should be used for the one hundred and first year. The one hundred and second column should be used for the one hundred and second year. The one hundred and third column should be used for the one hundred and third year. The one hundred and fourth column should be used for the one hundred and fourth year. The one hundred and fifth column should be used for the one hundred and fifth year. The one hundred and sixth column should be used for the one hundred and sixth year. The one hundred and seventh column should be used for the one hundred and seventh year. The one hundred and eighth column should be used for the one hundred and eighth year. The one hundred and ninth column should be used for the one hundred and ninth year. The one hundred and tenth column should be used for the one hundred and tenth year. The one hundred and eleventh column should be used for the one hundred and eleventh year. The one hundred and twelfth column should be used for the one hundred and twelfth year. The one hundred and thirteenth column should be used for the one hundred and thirteenth year. The one hundred and fourteenth column should be used for the one hundred and fourteenth year. The one hundred and fifteenth column should be used for the one hundred and fifteenth year. The one hundred and sixteenth column should be used for the one hundred and sixteenth year. The one hundred and seventeenth column should be used for the one hundred and seventeenth year. The one hundred and eighteenth column should be used for the one hundred and eighteenth year. The one hundred and nineteenth column should be used for the one hundred and nineteenth year. The one hundred and twentieth column should be used for the one hundred and twentieth year. The one hundred and twenty-first column should be used for the one hundred and twenty-first year. The one hundred and twenty-second column should be used for the one hundred and twenty-second year. The one hundred and twenty-third column should be used for the one hundred and twenty-third year. The one hundred and twenty-fourth column should be used for the one hundred

FIG. 3. Daily attendance, monthly scholarship, and standard-test scores are recorded on these cards

because of the trait," "has a noticeable deficiency in the trait," or "is conspicuous because of its absence." This type of record is splendid and will grow in popularity with both teachers and parents as more teachers realize its benefits and see that they more than compensate for the amount of time which such a record takes to fill out. Such a "conduct report" is virtually a listing of desirable social habits and gives the child, the parent, and the teacher a good measure of the effect of the school upon the establishment of some of these desirable habits and the rate of improvement.

Two other instructional records for which each teacher is responsible and from which she should derive much needed information about her class are the age-grade table and the grade-progress table. The age-grade table shows the relation of age to grade, giving the number of children of a given age in each grade. The grade-progress table shows the number of overage, normal age, and underage children who are in each grade.

In such tables it is essential that ages be computed from the same day of the year, for example, September 1, and that they be computed in a regular manner, and the method indicated on the table. If these precautions are not taken, the data are useless for comparative purposes. For example, one must know in working with such tables whether a child who was on September first, eight years and ten months old is being counted with the eight-year-olds, or with the eight-and-a-half-year-olds or with the nine-year-olds. He could be put in any of the three groups under systems now used, although there is a growing tendency to count him as nine years old, since that is his nearest birthday.

A grade-progress table lists the pupils in each grade according to the number of years or half-years they have been in school. Such tables show the number of children who are making rapid progress, normal progress, and slow progress through the schools. When a teacher has only one grade in her room she can make a very helpful combination of these two tables which will locate each individual pupil with respect

third copy should regularly be placed outside the schoolroom door for the convenience of visitors, supervisors, and special teachers.

Another set of instructional records which all teachers should keep is a daily-lesson plan book. Many teachers will think of this in terms of the elaborate lesson plans which they prepared during their practice teaching periods in normal schools. No such record is meant here, but instead a brief record of the work planned for the day in each subject. It should have a space or column for work not completed the previous day, such as unfinished reports or a left-over assignment, a space for the topics and principal references for the new lesson, and space for the new assignments. Such a record "serves as a guide for the teacher, as a practical checking basis for the supervisors, as a definite assistance to the substitute teachers, as a stimulus to a teacher for the preparation of her work, and lastly as the record of the work of a grade for a year. Such plan books, properly developed, will be a superior guide for the next year's work, and a supplement to the 'course of study.'"¹ For a more detailed discussion of lesson plans see *Principles and Characteristics of Good Teaching*, page 243.

RECORDS OF HEALTH. People who have made a study of education clearly realize now that if children are compelled by law to attend school their physical well-being as well as their mental and moral growth should be cared for during that period. Schools are finding it possible to discover a great many of the physical defects in children by means of medical inspection, school-nursing service, and the work of directors of physical education. Many of these defects yield readily to simple corrective treatments. Most of these corrective exercises, however, demand constant supervision in order to assure that new habits are formed and formed correctly. Classroom teachers are the most logical persons to assume at least some of this supervision since they are with the

¹Strayer and Engelhardt, *School Records and Reports*, p. 52. New York City: Bureau of Publications, Teachers College, Columbia University.

pupils during the greater part of the day. They will also be able to keep the measurements on height and weight, chest expansion, etc. For detailed information on this subject see the department on Health.

In this connection every teacher would do well to keep a recreational and "extra curricular" record of each pupil in the class. This she can do very simply by keeping a record card with a space for each month after the names of the pupils. In this space she may indicate by a simple code number the types of things which each pupil does before school and during recess—whether he is a member of the school baseball team, for instance, whether he attends movies frequently, and other items which show the pupil's recreational activities.

RECORDS ON INSTRUCTIONAL EQUIPMENT. The only records of this type which are of much concern to the classroom teacher are her lists of supplies requisitioned and received during the school year, the record of textbooks distributed to her for classroom use, and the annual inventory of the equipment of her room.

If regular requisition blanks are provided in the schools, the teacher will have her copy for filing. If such blanks are not in use the teacher should keep a careful record of all instructional supplies, such as writing and drawing paper, pens, pencils, ink, chalk, etc., which she has received during the year.

The most valuable item for which the teacher is responsible in this group is the record of textbooks, if they are furnished by the school. This record should carry full data on the books given to each child—the number of each book and its condition when the child received it. The pages of this register should be so arranged that many of the entries can be made by the use of a check or a simple code number. This record would be very simple if it were not necessary to check back all the books at the end of the term. It is possible that smaller units of textbook material in pamphlet form may replace some textbooks. These could be distributed to

the children and need not be collected for second use.¹

The problem of the annual or semiannual inventory is a tedious and involved process unless special blanks are provided which list practically all of the items in the various types of classrooms. In that case the teacher has only to count the articles and check against the number she had at the last inventory, plus any new ones added during the year. Such a page is shown in Fig. 5.

THE TEACHER AND HER USE OF RECORDS. Thus far in our discussion we have emphasized the work of the teacher as a maker of records. That is only one phase of her concern with records, although unfortunately it is the only phase with which many teachers have anything to do. The other phase is the *use* of the records—the ability to study them and interpret them, to see problems in them and the answers to the problems. The use of educational records and statistics has been too frequently left by teachers to the administrators and supervisors. This has been to the lasting detriment of the teachers, and has denied the administrative and supervisory officers the advice and professional counsel which they have a right to expect from teachers.

The study of simple educational records and distributions is a matter that requires a little perseverance, a good background of educational experience and training, an average amount of common sense, a large amount of interest in education, and a very small amount of special statistical training.

Once a teacher learns what a difference it makes in her teaching of composition to discover from the distribution of scores for her class that there are two very distinct groups to be dealt with, so far as their ability to write compositions is concerned, she will not worry about her statistical abilities but will start studying all the sets of data in other subjects which she has about her pupils. Once she starts doing this she is sure to be richly rewarded by a new and better understanding of her class, her work, her school, her city, and her

¹The possibilities of such a plan are presented by George Howard, Jr., in *Free Textbooks in Public Schools*. Published by the author at Raleigh, N. C.

Page 80

CLASSROOM (Including Cloakroom) Grade VI Room No. 216 Floor 2^d

Equipment or Material	Number on hand at time of inventory.					Kind; from whom purchased; cost per unit; date of purchase or receipt.
	6/23	6/24	6/25	6/26	6/27	
Pans, paint						
Paper, writing						
Paper, drawing						
Paper, manilla (reams) 6x7	2	3	1	4	5	
Paste (quarts)	1	1	1	1	1	
Pens (1/2 doz)	2	1	1	1	2	
Pencils (1/2 doz)	2	3	2	4	5	
Phonograph (Victrola)		1	1	1	1	No. 687 #75-1924 - loan gift
Phonograph needles (1 doz)			2	3	4	
Phonograph records	8	4	3			#10-1924 - loan, #50-1925 - loan #14 - Mann In. Bkfst
Phonograph record case			1	1	1	
Pictures (1 doz)	1	1	1	1	1	#8 - Ashburn Co. - class 23
2000 ft. of line		1	1	1	1	#12 - Brown Co. - from public school
The First Thanksgiving			1	1	1	#28 - Smith Co. - from school, done
Planbook	1	2	3	4	5	
Pointers				1	1	#50 - Bd. of Education
Projectoscope 30 L				1	1	
Readers, supplementary						
R. & L. 6 L	42	42	41	41	40	1925 - 1 lost 1927 - 1 lost
Wm. Brinker & Co.	39	39	39	40	40	
Southwestern, Mason		40	40	40	40	
Sandpaper						
Sandtable				1	1	#11 - Mann In.
Scissors (1 doz)						
Screen, projectoscope				1	1	
Sharpener, pencil		1	1	1	1	#1 - Bd. of Education
Shades, window	10	10	10	10	10	1927 - 10 new
Sponges						
Stand, umbrella		1	1	1	1	#13 - Mann In.
Table	2	1	1	1	1	1923 - 1 sent to Room 202.
Tacks, thumb						
Telephone						
Thermometer						
Waste basket						
Window stick						

Signed** 1923 M. R. Abel 1924 M. R. Abel 1925 J. C. Smith 1926 J. C. Smith 1927 J. C. Smith

19 _____ 19 _____ 19 _____ 19 _____ 19 _____

*The date of inventory should be recorded here. Dates should read as follows: 27/6/23 for June 23, 1927 **After completing inventory fill in the year and sign name.

FIG. 5. A page from a classroom inventory

profession. When she finds these rewards are hers for so little effort she will be professional enough to do the work necessary to become and remain a student of education.

BIBLIOGRAPHY

BAGLEY, W. C. *Classroom Management*, chap. iii. New York: The Macmillan Co.

BURTON, W. H. *Supervision and the Improvement of Teaching*, chap. iii. New York: D. Appleton and Co.

COLVIN, S. S. *An Introduction to High School Teaching*, chap. vii. New York: The Macmillan Co.

CUBBERLEY, E. P. *The Principal and His School*, Parts II and III. Boston: Houghton Mifflin Co.

FINNEY, R. L., and SHAFER, A. L. *The Administration of Village and Consolidated Schools*, chap. xv. New York: The Macmillan Co.

STRAYER, G. D., and ENGELHARDT, N. L. *The Classroom Teacher at Work in American Schools*, chaps. viii and xii. New York: American Book Co., Inc.

STRAYER, G. D., and ENGELHARDT, N. L. *School Records and Reports*. New York: Bureau of Publications, Teachers College, Columbia University.

Edward Samuel Evenden -

SCHOOL METHOD FROM THE PROJECT POINT OF VIEW



By

WILLIAM H. KILPATRICK, Ph.D.

Professor of Education
Teachers College, Columbia University

SCHOOL METHOD FROM THE PROJECT POINT OF VIEW

WHAT do we mean by method? Many teachers think of method as how to teach reading, how to teach long division, or, more generally, how to teach the different school subjects. This is one way, and a good way, to look at method and for many years it was the only way in which the word was used. But nowadays we give the word a wider meaning. We see that the way in which we manage the school makes a great difference in what is learned. More particularly the way in which we treat the children makes a great difference in the traits they develop.

If we scold our pupils much, if we are sarcastic, if we fail to see anything good in them, then they dislike us and they are likely not to cooperate with us. Instead, they often spend much thought trying, as they say, to "get ahead" of us or at any rate to "get even" with us. Where these things happen through our fault we are encouraging them to practice the ugly aspects of their natures. If on the other hand we look for the good in our children and encourage it, they are more likely to practice these good things. If we allow them to exercise some responsible part in affairs and they succeed with it, they are likely to be much happier, they feel better disposed toward us, and they are likely to grow along the good lines which they have been practicing.

TWO MEANINGS OF METHOD. Method then has two meanings for the teacher of today, an old and narrower meaning and a new and broader meaning. The old meaning thought first about the subject and asked how shall we teach it. We need this and always shall need it, but we cannot be satisfied with it alone. The new and broader meaning of method thinks first about the child and asks how best to treat him so that he will be thinking, feeling, and acting in the best ways.

WHAT "LEARN" MEANS. It may interest some of the younger readers of this book to think that the word "learn" is, like "method," also used in two ways. For many years the word "learn" made a teacher think at once of lessons. Lessons seemed then to be about the only things that school children learned. But psychology is changing all this. Learning in these latter days refers particularly to behavior. To learn is perhaps best thought of as to get a new way of behaving. Behavior, of course, includes a great deal, one's thinking and feeling as well as one's outward deportment. When a child feels hurt or angry, these are ways of behaving. When he thinks, "I can, but I won't," that is still another way of behaving. When he stands still "without moving a muscle," that is yet another way of behaving. To understand what *learn* now means we must think of some acquired change in the child's ways of behaving. Notice here the word *acquired*. Learning is acquiring a new way of behaving and the change is acquired only by practicing the changed behavior. This child, who last year cried whenever he fell, now picks himself up and says, "Big boys don't cry." This change means learning. It has been acquired by practicing that way of behaving. It has now become a habit. Again, the same child was beforetimes afraid of his uncle's big dog; now he likes to play with him. This is learning; it is an acquired change in his behavior. Still again this child now can tell orange from yellow, whereas once he saw no difference. Learning has taken place; this, too, is an acquired change in behavior.

TWO MEANINGS OF LEARN AND THE BROAD PROBLEM OF METHOD. In former times just as method meant only

teaching school subjects, so learning meant to teachers only or mainly learning school lessons. Now learning refers not only to lessons but also and mainly to any and all acquired changes in behavior. Method and learning have thus gone along together; when one has broadened, the other has broadened. The new and broad problem of method thus concerns itself with the totality of the child's learning, with all of the changes in his behavior considered as one whole. It asks: How shall I so treat this child that the totality of his learnings may be best, that his behavior changes, all taken together may be the best possible?

THE PROJECT POINT OF VIEW. Having thought of what we mean by method, let us next ask about the other half of our topic, the "project point of view." Some teachers have been confused about projects, but the matter is really very simple. A project is simply an enterprise. In school a project is a child enterprise, with emphasis on both child and enterprise. For anything to be a child enterprise, the child must feel and assume responsibility for it. If the teacher makes him do the thing, then it is not the child's enterprise, but the teacher's. So we can tell whether anything going on in school is or is not a project of the children only if we know how they feel about it. If they have in their own hearts assumed responsibility for it, it is their project. Another definition is that a project is the pursuit of a purpose. This comes to the same thing. If one is really pursuing a purpose which is in fact his own, then he has under way an enterprise for which he has in his heart assumed the responsibility. Or again a project is an instance of purposeful experience. Here again the word "purpose" tells the same tale; purposeful activity is but another way of saying the same thing. In each of these instances there is present a purpose which so dominates and controls the enterprise as to (1) furnish its goal, its aim, (2) direct its process, and (3) supply its motivating drive. But the definition first given is perhaps for our purposes the easiest: Any enterprise that is really the child's—that the child has assumed responsibility for—is a project.

SOME CONFUSING NOTIONS. Some writers at this point confuse matters in various ways. Possibly because children like so much to handle things, some try to say that a project can deal only with material objects. This is clearly wrong. Some children like to write poems. For any such child, writing a poem is certainly his own enterprise and accordingly is his project. Other writers will say that a project is a practical activity. Most child enterprises are practical activities, if I know what practical means, but to bring the word "practical" into the definition is only to confuse or mislead. Is a poem practical? Perhaps yes, perhaps no, but why ask? What difference does this make so long as it is the child's enterprise? Still other writers are much concerned that any activity shall either always be a project or always not be a project. For them if it is a project for one child it is a project for all children. Once a project always a project, they say. But clearly this is to call attention away from the main thing. Writing a poem might be a laborious task to one child, not at all his enterprise but only the teacher's; while for another child, writing a poem might be his very dearest enterprise. Grown people's enterprises vary, why not children's? Some writers also ask us to remember that projects were first so called in teaching agriculture and so only agricultural activities can be called projects. To me these notions seem queer. Some of them would be amusing if they did not confuse young teachers and keep them from seeing the really important point of the whole matter. The reason we wish child enterprises in our ordinary schools is not because they are agricultural or material or practical, but because the child learns better from them. The child gets better training and so learns more when the enterprise is his own, when he accepts responsibility for it and himself undertakes to carry it through to completion. Better child learning is the important point in the matter.

LEARNING MANY THINGS AT A TIME. Before going farther with the "project point of view" we must ask and answer another question. Does a child learn just one thing or many

things at one time? Suppose a child is preparing an arithmetic lesson. Is he learning one thing or many? We remember that the word "learn" refers to all the abiding changes of behavior acquired through practice. We wish then to know whether this child is acquiring one or many changes of behavior while he is working at his arithmetic. What is he practicing? Does all his practice fall under the head of arithmetic or does some of it fall outside? As soon as we ask about practice we see at once many things, not just one.

(1) He is sitting in some posture of necessity. If so, he is learning a way to sit. It may be good, it may be bad. He may not think about it, the teacher may not think about it. But he is sitting and he is learning to sit this way; and this half-hour helps to fix this way of sitting in his nervous system.

(2) In like fashion he is using his eyes close to his book, far from the book, or just right. The way he holds his book is fixing his way of using his eyes, good or bad. Thus again is he learning.

(3) Further, he is behaving in some fashion with reference to the other children. Possibly he is by nods and winks leading them away from their lesson, or possibly he is by his diligence encouraging them to study. He is necessarily behaving in some fashion with reference to them and is accordingly fastening some habits along this line in his nervous system. We need not go into detail about the others.

(4) In the same way he is building attitudes (a) toward the bank discount which he is studying, either to like it or to dislike it; (b) toward arithmetic as a study; (c) toward the teacher; (d) toward himself as being capable or not along such lines; (e) toward school as a place to be sought or to be avoided; (f) toward law and order and government as the rule of the strong over those who can't defend themselves or as the right way for all to behave.

These are not all the things we see, but they are enough to enable us to answer our question. A child is never for any length of time learning just one thing. He is always learning

many things. It is inevitable, and we are partly responsible for what he learns. If we can help him to do better, we are by that much responsible for what he does.

NEW LIGHT ON THE BROAD PROBLEM OF METHOD. This fact of many simultaneous learnings helps us to see better what is meant by the broad problem of method. A child is learning many things all the time. The broad problem considers them all. If we think only of arithmetic, the child may learn the other things badly. The way we treat the child will influence what he learns, especially along these attendant lines. If, like some teachers, I scold and threaten, the child will probably grow to dislike me and also to dislike the subjects I teach and the school. And he may come to believe that he cannot succeed no matter how he tries.

If, however, I find opportunities for the children to engage successfully in some worthy school enterprises, and if I encourage them and help them, living pleasantly with them, they will probably come to like the school and respect themselves and like the kind of work they succeed with. Trusting them, speaking kindly to them, giving them the chance to think, to plan and devise and execute—these are good ways to get children to build good attitudes. One main reason why we believe in using projects, child enterprises, is that through them we can best solve the broad problem of method. Through child enterprises we best take care of the many simultaneous learnings.

THE PROJECT AS A SOLUTION TO THE BROAD PROBLEM OF METHOD. To see more clearly how project work helps to solve the broad problem of method, let us take the case of some older children studying a political history problem.¹

A STUDY OF THE IRISH PROBLEM WITH ITS OUTCOMES. A class of junior-high-school pupils attacked the question: What should Great Britain do with or for Ireland? This was

¹The incident is founded on fact. See Roy Hatch, *Teachers College Record*, 21:452-69. The account here given is adapted from an article by the author in the *Journal of Educational Method*, 3:145-47, "What Can We Learn from a History Project?"

in 1920, just before the founding of the Irish Free State. First of all the problem was their own, undertaken by them somewhat against the better judgment of the teacher. Feeling responsibility, they worked the harder at it. Having a definite aim they had a goal by which to guide their search for the answer and by means of which to test their findings. But we are here concerned to note the outcomes, the varied heads under which learning took place.

1. By their zeal in attacking this problem they learned better how to go about such matters. It was easier for them to analyze the next problem undertaken. They learned better how to find and use sources; how to organize material so found in the solution of the problem.

2. They made progress in thinking along such lines, in judging their thinking, in weighing evidence, and the like.

3. They learned a considerable amount of the history, politics, and geography of Great Britain and Ireland bearing upon the problem at hand.

4. They grew—perceptibly so in the judgment of the teacher—in such desirable traits as open-mindedness, tolerance of the views of others, and the belief that opinions should be based on study and regulated by its results.

5. They made progress in getting such useful *concepts* as absentee landlordism, in such social *ideals* as the orderly process of settling national disputes, and in such social *attitudes* as an appreciation of the worth of institutions.

6. They built, some of them very positively, certain definite intellectual interests in history and politics, an interest in the Irish question, in British and Irish history, in European history, in history in general.

7. They made progress in building such valuable personal attitudes as a reasoned self-confidence in working at such matters. They felt surer of themselves as they attacked the next problem.

8. They improved visibly in such social virtues as courtesy and cooperation with others and in the settled attitude that “light, not heat” should prevail in such discussions.

9. It is fairly certain that they increased in respect for interest and achievements in such intellectual and moral inquiries and endeavors.

LEARNINGS, GOOD OR BAD, ARE INEVITABLE. Here are nine heads under which learning took place. It is important to note that children working in this field will necessarily learn under these heads, but they may learn slipshod methods instead of good ones. They may learn antagonism to such matters instead of interest in them. They may build habits and attitudes of discourtesy and the like. They may build distrust in themselves for work along such lines. Our children will learn—that is inevitable. But what they learn, whether it be good or bad, depends largely on us, on our ways of treating them. If we merely assign so many pages in the textbook to be “learned,” almost certainly they will fail to build positive habits of thought and attack upon problems. Rather will they build habits of acquiescence in what others think. Instead of learning how to use reference books, they will acquire habits of helplessness, feeling that they couldn’t possibly look up a subject. Indeed they too often build the idea that only “highbrows” ever do so, that red-blooded boys and girls are above taking an interest in such matters. On the other hand it is easy to see how successful pupil enterprises along these lines, wisely led, will naturally tend to good learnings under all these heads. Nothing succeeds like success in enterprises that have been undertaken with a sense of personal responsibility.

TWO WAYS OF STUDYING. One further thing will help round out what is here meant by the “project point of view.” Let us contrast two boys, one working in school at division of fractions, the other at home writing a letter to a mail-order house for a broken part on his bicycle. Suppose both of them work hard and each in the end succeeds in what he sets out to do. Do they study? Yes, both of them. Everyone would probably agree that the division-of-fractions boy studies, at least in a fashion. We are all accustomed to that. But how about the other boy? Yes, he studies. He has never before

written just this kind of letter. He must get just the right address of the mail-order house, he must see in the catalog just how to make out his order, he must make clear just what the broken part is. Besides he wishes also to send off a letter that looks well. He works a while and shows it to his mother. She points out certain things he hadn't noticed. He writes it over again, taking pains at every point. Yes, he studies.

TWO KINDS OF LEARNING. Why did these boys undertake these activities? The one boy worked at the fractions because the teacher set the lesson. The other boy on his own responsibility undertook the letter. Both studied. Did both learn? Yes, the one boy learned that he must "invert the divisor," etc.; the other boy learned a good deal about writing this kind of letter. Why did they learn? What was the occasion for the learning? What was the situation in each case that called for the learning? The fractions matter was learned because the teacher said to learn it. It was in the course of study. The other boy wanted to ride his bicycle but couldn't because it was broken. He had to get the broken part. He thought he could order it and save the expense of taking his wheel to the shop in the city. Why then did he learn? He learned because getting his bicycle mended meant writing a letter and he, being the kind of boy he is, couldn't write the letter without learning. Learning was involved in the writing. He learned in order to write the kind of letter he wished to write. We understand, then, how this boy's letter-writing enterprise, his project, involved learning. He couldn't carry on his enterprise without learning. Then it seems that the teacher and the course of study called forth the one instance of learning, and the boy's own life enterprise called for the other learning.

"INTRINSIC" VERSUS "EXTRINSIC" LEARNING. It may help us to give names to these two kinds of learning. The letter-writing learning we may call "intrinsic" learning; the other "extrinsic" learning. The one is involved in, is intrinsic in, the boy's own life (as he sees and values life). The other

came from the teacher, from outside life as the boy sees and values life. If left to himself, it would probably have been a very long time before this boy would have thought of dividing one fraction by another. In the "intrinsic" that which was learned was learned because real life demanded it then and there. "Intrinsic" learning is for use now, and the need is seen and felt by the child. "Extrinsic" learning looks rather to some distant future seen by the teacher. If now we take any instance of whole-hearted project, we shall see that the learning is intrinsic. If we take ordinary school learning, we shall see that much if not most of it is extrinsic learning.

THE PROJECT POINT OF VIEW DEFINED. We are thus ready to state more fully and more definitely what we mean by the "project point of view." It is the way of looking at education that sees and appreciates the broad problem of method; that sees and accepts responsibility for the many simultaneous learnings; that sees the difference between "intrinsic" and "extrinsic" learning and prefers the "intrinsic"; that believes in using projects as much as it can, holding that projects, child enterprises, purposeful activity, if properly managed, will mean more and better learning. The project point of view would ask us to note certain phrases used above: "appreciates" the broad problem of method, "accepts responsibility" for the many simultaneous learnings, "prefers" the intrinsic, believes in using projects "as much as it can," holding that projects "if properly managed" will mean "more and better learning." All of these quoted phrases have a kind of sweet reasonableness in them. They do not lay down hard and fast rules of procedure. They point out the direction in which we wish to go, but they expect us to use our good common sense in deciding how far we can *in our situation* afford to go. The project point of view does not say that it is a panacea to cure all the ills of our schools, it states its belief that the use of projects, *if properly managed*, will mean *more and better learning*.

THE PSYCHOLOGY OF LEARNING. What reasons have we for believing these claims about the "project point of view"?

What is the basis of such claims? How will the use of projects mean more and better learning? To answer these questions we must turn to psychology. It has some valuable things to tell us about learning and how it takes place.

HABITS AS WAYS OF BEHAVING. Let us first of all recall what it means to learn. Learning has to do with behavior, with changes in behavior, with abiding changes in behavior. The word "habit" will perhaps help here. What we ordinarily call a habit is one instance of learning. A habit has been learned, and it abides with us, perhaps not for a lifetime but certainly for some time. A habit is a way of behaving, a change from our previous way of behaving, an abiding change in a way of behaving. If we properly broaden out our notion of habit it will include all learning. Suppose a child learns to spell the word "eight." He now can and does spell it, e-i-g-h-t; formerly he could not be certain of spelling it this way. Spelling it right is a way of behaving. As long as he "remembers" how to spell it, this way of behaving abides with him. In other words he has now fixed in him the habit, when the word is called for, of spelling it e-i-g-h-t, and not a-t-e or a-i-g-h-t.

In the same way all that we learn in school or in life may be called habit, habits of thinking, perhaps, or habits of feeling or habits of outward movement. Suppose I have memorized a poem. If I can say it, this means that I have fixed in me the words of the poem by habit so that they will come of themselves when the occasion arises. So with the multiplication table. If I "know" that 6×8 is 48, this means that I have fastened in me the habit of surely thinking 48 as the answer to 6×8 . So with geography. If I "know" the capital of France, it means that I have a habit of surely thinking Paris when the capital of France is called for. It is the same way with likes and dislikes. They are habits of their kind. Let us then keep in mind that learning means making habits, making fixed changes in our behavior.

WHERE DO HABITS ABIDE? Where is such learning located? We have said that learning abides. *Where* then does it abide? The answer given by psychology is that learning is a change

in the nervous system; it abides in our nerves, or more precisely in what are called neurones (one nerve is a bundle of many neurones). In order to telephone, "central" must connect our line with the line of the other party. In some such way learning is an abiding connection between or among two or more neurones. In learning $6 \times 8 = 48$, the neurone (or group of neurones) by which we think 6×8 is joined abidingly to the neurone (or group of neurones) by which we think 48; so that when we think 6×8 we shall at once think 48. To know where learning is located may help us in our efforts to bring learning about.

ALL BEHAVIOR IS RESPONDING. In connection it may be well to point out that all behavior is responding. We behave when we respond to a situation. Someone calls my name. I respond by looking about to see who it is. He had seen me first. His calling was his response to his seeing me. In a quarrel Tom strikes John. John hits back. Both are equally responding; John responds to the blow, but Tom responds to a dare previously given by John. Any behavior is a responding to a situation which calls out that behaving.

LAW OF EXERCISE. With these things in mind we are now ready to ask more closely how habits are built, how learning takes place, how responses are built into one's nervous system, how neurone connections are so made that they remain. There are several rules. The first rule is an old rule, known in a way for thousands of years. We call it the Law of Exercise: To learn anything we must practice it; to build a connection we must exercise it; to build a response into one's nervous system we must respond in that fashion; we shall not learn what we do not practice; we learn the responses that we make.

These different statements all come to the same effect. The successful practice of a movement builds that movement into a habit or skill. We learn it by practice. Some people would have us think only of repetition; but this is wrong. The only reason that repetition works is that each practice has some effect. This is not to deny that in many cases repetition

is necessary in order to fix adequately a habit or skill. Such repetition is what we call drill. But in all such instances the repetition works exactly by accumulating a number of smaller practice effects. It is still the exercise of the response that fixes that response in the nervous system. Without exercise there is no learning. We learn the response that we make.

DISREGARDING THE LAW OF EXERCISE. That we cannot learn anything unless we practice that thing seems very evident. The world has known it so long and it seems so reasonable that we should expect every parent and teacher to know it and to follow it always. Yet how many times we act as if it were not even true. We wish children to learn how to think things out for themselves, yet in school we often, if not generally, take pains to tell them in our textbooks just what to think. We give them our predigested thinking. We wish children to learn to cooperate thoughtfully with others, yet we often so manage our schools that they have little or no proper chance during school hours to cooperate at all. We wish our pupils to learn responsibility, yet we often so manage our schools that they have little or no proper chance to practice responsibility. We wish our pupils to become morally strong and morally discriminating in meeting the many various duties of life, but some teachers so manage their schoolrooms that the children practice nothing in the moral realm except obedience and fear.

Such schools offer so little of real life that the children have very few opportunities to practice meeting the many situations of life. In the same way many parents and teachers decide everything for their children and then wonder that the children do not grow in power to decide. The only way to grow in power and disposition to decide is to practice deciding. In all such cases, as everywhere else, the child learns only the responses that he actually makes. If he is to learn anything he must practice that thing.

PROJECTS MEAN BETTER PRACTICE. One reason then why we believe in the project point of view is that it tends on the one hand to enrich school life and on the other to encourage

child effort and child responsibility. Child enterprises mean more of the quality of life in school, more of the kind of things in and through which real child life goes on; they mean equally as well more exercise by the child of all the different sides and aspects of life. In project work many things like responsibility and planning are practiced as in no other kind of work. There are some other things to be said later, but it seems clear that the project point of view means a fuller and better use of the Law of Exercise than did the old school.

LAW OF EFFECT. A second rule of habit formation, very important but relatively new to most people's thinking, is called the Law of Effect. It tells us that mere practice is not sufficient for building a habit, that it is successful practice which builds the habit, that practice with failure won't build the practice into a habit but rather into an aversion. A boy thinks he knows how to throw a certain curve. He tries but the ball doesn't go the way he intended. The plan fails. He tries again and again, but it fails every time. This simply isn't the way to throw that curve. Does his long-continued practice build this plan, this way of throwing, into a habit with him? No, he is less likely to try it next time than he was this time. Practice, even the repetition of practice, doesn't build this unsuccessful movement into a habit. Rather it works the other way. We are now ready to state more definitely the Law of Effect: We learn to do what we do with success and satisfaction; we learn not to do what we do with failure and annoyance.

HOW "EFFECT" AFFECTS LEARNING. This law pervades school learning to a degree that will surprise anyone who has not thought about it. Suppose in a class in number combinations the teacher asks John, "What is 6×8 ?" John doesn't "know"—that is, he has not yet built 48 as a habit response to 6×8 —but some numbers are more likely to be offered than others. Let us suppose that 54, 45, and 48 stand at the head of John's list of possible answers. When the teacher asks 6×8 , John answers 54. But this does not succeed, it does not satisfy either the teacher or the other children. That

54 won't do is now clear; as an answer it is a failure. John then tries 45. This too meets a stony stare from the teacher and possibly giggles from the class; 45 too is a failure and it is very annoying. John now hastens to try 48. This succeeds and he is greatly relieved. Suppose now that the teacher at once says, "Let us try it again, John. What is 6×8 ?" It is very clear to us all that John is *less* likely to say 54 or 45 than he was before and *more* likely to say 48. Why is this? The memory of other things in connection complicates the matter a bit, but apart from this the reason is that 48 succeeded and the others didn't. In effect, the failure of 54 and 45 lessens or dries up the neurone connection which they at the first had with 6×8 ; and the success of 48 strengthens its neurone connection with 6×8 . If the Law of Exercise (as repetition) comes now to aid the Law of Effect, and 48 is with satisfaction thought of a sufficient number of times as the answer to 6×8 , then 48 will be fixed as a permanent habit of thought in John's mind. To see what learning really means in this connection, to see that learning is really making a habit, let the reader have someone suddenly ask him, say, "How much is 6×3 ?" If the fact be really well "known," the answer will come of itself in spite of any efforts one may make to prevent it. If it be well "known," well fixed, thinking can neither help nor hinder its coming. It comes of itself. This tendency "to come of itself" is what we mean by habit, and it is exactly this tendency that is given by exercise with the sense of success.

SUCCESS MUST BE KNOWN AND SUCCESS MUST BE WISHED. It may be well to call attention to these last three words, "sense of success." The learner must know about his success, or *effect* cannot get in its work. This has very great practical bearings. If we expect a child to learn through success, he must know whether he has succeeded. In fact we may say two things of importance in this connection. First, the more certainly and clearly the child can tell success from failure, the quicker will he learn. Roller skating thus teaches itself much more readily than does punctuation. If

he fails at skating, he finds it out at once and very definitely. If he fails at punctuation, his failure is not nearly so evident. The second important thing is that the greater the satisfaction at success (or the annoyance at failure) the quicker and more lasting the learning. Roller skating and punctuation will illustrate this, too. A failure at roller skating is very annoying, more annoying to most children than is a failure at punctuation. This is then a second reason why he learns skating more quickly.

If, then, we wish a child to learn anything, three conditions are necessary: (1) He should be so disposed toward the thing that success is satisfying and failure annoying. He should be glad when he succeeds and sorry when he fails. When he is in this frame of mind, he must then (2) exercise the thing under such conditions as (3) clearly tell success from failure. These three conditions mean that the laws of Exercise and Effect are working together for us and not against us. The first condition we must discuss further, but we may by anticipation call it Readiness, and say that the three conditions favorable to learning are Readiness, Exercise, and Effect.

READINESS. The factor of Readiness is one that we can easily observe in ourselves. Some things we are ready for, some others we are unready for. At times we may be ready for a thing, at other times unready. We are ready to hear kind words sincerely spoken about ourselves. We are unready to hear sneers at us or at our friends. A growing boy is quite ready to hear dinner announced; but after a hearty meal he is not so ready. Racers waiting for the signal to begin may be so ready that they honestly start off too soon. A person when he is in the "blues" may be much readier to sense slights than at ordinary times. A girl is generally readier than a boy to look at *Vogue*, and if a new dress looms ahead she may be more ready to do so than usual. Readiness is thus an everyday fact. If one is ready to do a certain thing, to do it gives satisfaction, and not to be allowed to do it gives more or less annoyance. If one is unready to do a thing, to be compelled to do it gives annoyance.

READINESS AND EFFECT. It is easy to see how *readiness* connects itself with the Law of Effect. If one is so ready and disposed toward anything that success with it is satisfying and failure annoying, we have exactly the conditions for utilizing the laws of Exercise and Effect. One who wishes to succeed with anything will be ready to try it (this means Exercise). Also if he wishes to succeed he will be on the lookout to discriminate success from failure, and if he does succeed it will be satisfying and if he fails it will be annoying (this means that the Law of Effect is operating). Learning may thus confidently be expected.

It should be pointed out in this connection that one may learn from either success or failure or both. Suppose I move into a new house and the switch button in the hall which turns on the electric light is at a new place. I must then learn where to find it in the dark merely by feeling. There can be no doubt of my attitude. I wish to learn. I am ready to succeed. I try (Exercise). If I succeed, I know that I have found it and am pleased. If I fail, I know that I fail and am annoyed. Under such circumstances, the Law of Effect works both through success and through failure: the times when I fail fix automatically in my nervous system the tendency not to put my hand there again; and the times when I succeed fix automatically in the same way the tendency to put my hand again at that height and direction. To repeat, successes and failures leave their automatic effect among my neurones. If I am in the right attitude (that is if I am sufficiently ready), I will try, and success will satisfy and failure will annoy.

SET AND READINESS. In the foregoing account we have not distinguished set and readiness. For some purposes it is well to see the difference between them. If I am angry I am not ready to hear funny stories, but I am ready to hear plans for getting ahead of my enemy. Here anger is a state of affairs within me which makes me ready for some things and unready for others. Such a state of affairs we call set or mind-set. Often there is a definite end in view upon which one is

set, and we may then speak of a mind-set-to-an-end. A boy is making a kite. If he is whole-heartedly bent on the enterprise, we may say that he has a mind-set-to-the-end of making a kite, a kite that will fly and fly so well as to win the admiration and praise of his fellows. It is easy then to distinguish three things, the end in view, the mind-set to this end, and the boy's consequent readiness for anything that will help him succeed in attaining the end and unreadiness for anything that will interfere.

To be set on anything, to be ready for anything that helps to bring it, to be unready for anything that hinders—these are exactly the conditions that make for efficiency in the world of affairs. Set and readiness mean then, among other things, that the person so set and ready is more efficient than otherwise he would be. Whatever resources of thought and action he may have pertinent to the matter at hand are thus made more available for use. Set and readiness mean unusual efficiency for the matter at hand.

SET AND READINESS IN PROJECT WORK. The connection of set and readiness with the project point of view is now sufficiently obvious. In this point of view we are concerned with child enterprises, such enterprises as enlist the child's whole-hearted interest, where he has a clear and definite purpose in view and is bent and determined to succeed with this purpose. The psychological essence of such an enterprise is exactly the presence of set and readiness. And the presence of set and readiness as we have seen means both efficiency of action and efficiency of learning. With set and readiness present, the laws of learning are working for us.

ILLUSTRATION OF MAKING A CASTLE. Suppose a boy thus set on making a model of a medieval castle. This set makes readier all that he now knows about the subject and, besides, makes him ready to hear and learn more. He will search out history books, he will pore over pictures and drawings. If there is a model in the museum he will wish to go to see it. He is further ready to learn about suitable material of which to model the castle, and, having decided to use pasteboard and

glue, his eyes are keen to see any suitable boxes as sources of pasteboard. The writer of these lines in his youth found cigar boxes so suitable to his many construction projects that to this day he looks with longing eyes on any empty cigar box, even though forty years have elapsed since he has had any use for one. Permanent interests may in this way be added to life. As the boy models his castle, his successes gratify; and the right form, secured after many efforts, means increase of skill as well as the fixing in memory of the resulting form. When grown older he visits the Tower in London he has a basis of perception and appreciation which means much. Richard I as the best builder of such castles, lives for him in a new way, and the boy wishes he could have seen Rouen before its destruction.

MANY SIMULTANEOUS LEARNINGS. After the model is finished the boy must explain its parts first to his class, then to the assembly, and finally to the visitors at the exhibit. Here set and readiness again combine to use the laws of Exercise and Effect as he describes in detail each part and function. He learns thus much about the old castles, far and away more than any course of study would dare require. In connection he may well learn more of the history of the period than any school text would dare to give. Moreover, he himself, has thought it through. The knowledge is his own, and telling it to others who do not already know it gives this knowledge such body and form and coherence as he could get in practically no other way.

Perhaps even more important, he is now permanently interested in the period and what it means in history. He has found interesting leads which he means to follow. He better understands other matters. His mind is at some later appropriate time alert to contrast, for example, feudalism with existing society. He has the background both of knowledge and interest in feudalism with which to follow the economic problems involved. Possibly most of all he leaves the enterprise feeling that he has done something worth while. He has tried and succeeded. He now knows what it means to stick

to a thing until it is done. He can do a bigger thing next time. He can and he knows that he can. He feels, too, that even though a boy he has joined the ranks of those who know and of those who succeed. It is a worthy company, and he respects himself and others respect him that he has joined it. He looks out on life with a new confidence.

DIFFERENT KINDS OF LEARNING. It may be worth while in connection with what has just been said to return again explicitly to the wider problem of method. We may conveniently group what this boy has learned under three main heads: the primary learning, the associate suggestions, and the concomitant learning. What he learned about the castle and its significance, all that went into the making and understanding of the castle—this we call the primary. The interesting possible leads into other fields that showed themselves as he worked, the matters that suggested themselves as worthy of later pursuit—these we call associate suggestions. All the rest of the learning, principally, perhaps, the interests and attitudes built—these we call the concomitant learnings.

The old and narrow problem of method tended to fix its attention upon the primary learning only. And this it generally sought extrinsically, with the result that it generally got a hard and shriveled primary learning and often got it badly. It got few wholesome associate suggestions, and it often, if not generally, built bad concomitants. We get the difference at the extreme if we contrast the teaching of medieval history from one dry textbook by the “next twenty pages” method of assigning with the learning got here from building the castle or the learning got by Mr. Hatch in modern history from the Irish question project.

WHY WE BELIEVE IN THE USE OF PROJECTS. We are ready now in conclusion thus far to sum up as to why we believe in the project point of view. We believe that, if wisely directed (a matter we must discuss in the concluding pages), the use of projects will so bring set and readiness as best to utilize the laws of learning. With the mind set upon a definite end,

the resulting readiness makes available all the mind's resources of action. There is then greater practical efficiency of action. Moreover, the end in view helps the learner to tell success from failure, while his purpose to succeed makes success gratifying and failure annoying. This means that learning is quicker and more abiding, for whatever we do with success and satisfaction we learn to do, and whatever we do with failure and annoyance we learn not to do. There is, moreover, increase of good outcomes with each increase of purpose. The stronger the mind-set the greater is the satisfaction from success and the greater is the annoyance from failure, so the stronger will be the learning.

BETTER ATTENDANT LEARNINGS AND BETTER ORGANIZATION. This quicker and stronger learning that comes thus from a strong mind-set, a strong whole-hearted purpose, means not only better primary learning of the things immediately under consideration but means as well more numerous and more wholesome associate suggestions of other interesting and valuable things to be done. It means also, and often most significantly of all, the most wholesome concomitant learnings. Better and finer attitudes are generally built toward the matter at hand and toward everything and everybody else connected with the successful pursuit of the purpose. The attitudes so built are very far reaching; they greatly influence subsequent affairs, for out of the heart are the issues of life.

Finally, the purposeful pursuit of an enterprise means not only more efficient action and better learning results, but also better organization of these results for future use. What is learned is learned when and as it is used; it is learned accordingly under conditions that promise best for its later recall and for its use in practical life situations. Increased practical efficiency, better results in primary, associate, and concomitant learning, better and more practical organization of learning—these, with greater happiness to all concerned, are among the considerations that incline us to the project point of view as the next forward step in education.

WHAT THEN SHALL WE DO? What shall we actually do about this project point of view? One thing that many will do is to accept it in theory, but in practice continue the old ways of teaching and managing children. Probably few will knowingly or consciously do just this, but many will in fact do it. Many there are who like the name of being "up to date," but are not willing to take the pains necessary to change their practice. Sad to say, lip service to ideals is all too common. Changing is not easy. A radical change all at once is almost if not quite impossible. So for a while many will profess the new point of view, but practice the old.

COMPLETE IMMEDIATE CHANGE NOT POSSIBLE. But what can we do? Suppose that we are willing to follow and obey the argument, can we change all at once and completely to the new, from the kindergarten right up through the high school? As thus asked there is only one answer: a complete change at once, no; we could not if we would. What then can we do? The answer is different for the different grades. For the kindergarten and first grade we can now, if we will, put the work pretty fully on the project basis. It is already being so done in many good schools. Where the authorities approve, parents consent, and the teachers understand and wish it, it can be done.

We have had for some time the requisite technique pretty well worked out. Certain reasonable conditions as to numbers, equipment, and course of study must be met to be sure, but they are comparatively easy. We have succeeded for these early years in making the transformation. Practice here can feasibly be made to approximate theory. But the higher up we go the greater are the difficulties to be met. Much good work can be found, but on the whole the higher up in the grades we go, the smaller is the proportion of the class work based fully on the project point of view.

WHAT HINDERS? Why should it be more difficult for the upper grades? Is the point of view itself at fault? Does it not apply so well higher up? Nothing of the sort appears to be true. Rather do the difficulties appear to be the result of

intrenched inertia. Tradition holds its sway here more strongly than with the lower grades. It appears to be mostly a matter of subject-matter, or rather a fear that valuable subject-matter will be lost. The high school is frequently not free to change because the college entrance requirements are so precise. Official courses of study are often formulated in terms of such prescribed quotas of information and skills to be acquired within set times as greatly to hinder a freer procedure.

Sometimes, as in New York State, some central authority sends out uniform examination questions for a whole city or county or state as the case may be. Wherever this is done teachers are likely to feel that, as they are going to be judged by their pupils' success in the examination, their efforts had best be directed to such matters as are called for in examination. A common result under such circumstances is that teachers study and teach former examination questions rather than anything else. Under such circumstances we have an almost total disregard of the wider problem of method.

Immediate specific drill and memoriter work are only too frequently the rule. Pupil-thinking and initiative are all but impossible. And, sad to say, the new scientific tests, excellent as they are, can be used to continue this slavery of the teacher to mere drill. The fact that the tests, where they fit, are so accurate means that the higher authority can, if it so wishes, say explicitly to a teacher, "Your children fell down on the arithmetic tests last month. They stand low in comparison with the others. You must bring them up." When a teacher hears this, she will be only human if she lays aside cooperation and responsibility and everything else that cannot be tested, and spends her time on the things that can be explicitly tested. So again the broad problem of method suffers.

PRECISE PRESCRIPTION HINDERS. When the writer of these lines was a small boy, a village wag one day said to him, "I'll give you a dollar if you will *stand* at this crack in the floor and jump to the next crack." When I easily jumped the width of one plank the man mystified me by saying, "But

you didn't *stand*." Years later I understood. His offer included two contradictory conditions, I must jump while I continued to stand. I must do both simultaneously. On such terms was the dollar offered. In much the same way do some school authorities say to the teachers, "You may follow the project point of view provided you continue to furnish the old quota of fixed-in-advance subject-matter." If these quotas with their time limits are fixed minutely enough, the teacher can no more furnish them and follow the full project point of view than could I back in the old village both stand and jump at one and the same time. It can't be done.

In the end we believe that the old subject-matter—so far as it is defensible—will be got on the project basis with much else besides, but we cannot say in advance just when or just how it will be got. If school authorities attempt it they simply so hobble teacher and pupils that they cannot introduce worth-while child enterprises and activities into their school procedure. By so much as the educational outcomes are named and required in advance, to be furnished within narrowly set times, by that much must the project point of view be put aside. The two procedures are essentially contradictory. This, next to unpreparedness of teachers, is probably the greatest single obstacle to the introduction of project work.

BEGIN WHERE WE ARE AND WORK TOWARD THE IDEAL. Is there then nothing to be done? Must we wait for conditions to change before we try to change school practice? Most certainly not. While we cannot at once have all things changed, there are still definite things we can do. No matter where we find ourselves, we can in spite of all the prescriptions, all the prejudices, all the entrenched conservatism, still find opportunities to push ahead *toward* a better state of affairs. Note the word *toward*. We can work *toward* a better state of affairs. If we do our part, others will see our success. If our doctrine is sound, it is bound to win friends.

THE ESSENCE OF PROJECT WORK. What are now the feasible things that can be undertaken? What can we do? For

answer go back just a minute to the essence of the project point of view—to child enterprises. What we wish is that the child be engaged in something which he can and does look upon as *his* undertaking, for which *he* can and does feel responsible, into which *he* can put initiative. The degree in which these conditions hold, in that degree is the project method present. Now the teacher who sees this and is willing to work for it can find some possibilities of action even with the least modern course of study and in the most antiquated school system.

ENCOURAGE PUPIL-THINKING. In the further discussion let us distinguish three things, the course of study, the social relations of pupils, and the “extra curricular” activities, and let us take them up in this order. First, the course of study; we can so teach it—some of it at any rate—that we appeal to the thought of the pupils. If then we take pains to call out the thought of our pupils and, what is more, respect thought when it is offered by our children, we shall find that our pupils, beginning probably with the most capable, will increasingly respond to our endeavors. For children do like to think. When we say “respect their thought,” does this mean that we are to take any and every foolish suggestion that they may make? Exactly no; if we do, we shall kill their inclination to thought. Each thought must be taken for what it is worth. The pupils will like nothing better than to weigh and evaluate the different suggestions; but we must, as far as we can, bring it about that *they* weigh the suggestions, that *they* evaluate. If in all these matters we respect them and respect their feelings, we shall find them growing in intellectual self-respect and in confidence in us. If so, we are succeeding; the broad problem of method is working for us, we are in so far introducing good teaching of the past. What has just been said answers a question often asked: “How is it that teachers in the past got really good results and yet knew nothing of this modern talk of pupil enterprises?” We must admit that a century ago excellent results were secured by teachers whose prescribed lessons with whippings for the

failures seemed to go against all we have been saying. Apparently there were no child enterprises. What the children did was all prescribed by the teacher. In reality, however, the teacher succeeded in spite of prescriptions and whippings, sometimes through the prescriptions and whippings, in getting the pupils actively to think, to think for themselves. Most children probably were either deterred from entering school or were driven out by the methods used, but a few got on in spite of the bad management. Some did think. To that degree the prescribed enterprise became the pupil's. Within these limits, readiness, exercise, and effect did get in their work. Primary, associate, and concomitant learning took place accordingly for these favored few.

SEEK RESPONSIBLE ACTION. But to return to the teacher who is hampered by restrictions. Just what can be done toward the project method will, of course, vary with the age of the children. The younger the children the more of physical movement we should expect and encourage; the older the children the more of definite thinking we can hope to get. But in saying this we must not forget that we are dealing here with proportion; the youngest children will wish to think in their way and degree about their problems and the oldest pupils will need some physical movement and action. Fortunately almost all courses of study nowadays allow for both action and thought. The teacher then who accepts the project point of view will simply seek for all feasible opportunities to call forth responsible action from the pupils. The older and worse the curriculum, the fewer such possibilities; the newer and better the curriculum, the better and more numerous the possibilities. Suppose the class is studying the geography of Africa and on the old basis. We shall better teach just what is required, however specific, if the pupils are interested and themselves with some measure of their own responsibility work with the things to be learned. Suppose a long list of dead dry facts of location. If we have first taken an imaginary journey through the region and have read and discussed interesting experiences of Stanley or

Livingstone or Roosevelt or Cecil Rhodes, we shall have a background of knowledge and thought that will make the map live in a new way. Pegs there will be in the pupils' memory from which to hang locations which now are no longer so dead or so dry.

GO TOWARD THE IDEAL. Let the reader not mistake what is here being advocated. Such a procedure as that just suggested is in good measure using the project point of view as a mere method device. The map question in Africa must be learned; the project method is one way of going about it. This is true and if this were all, this writer for one would be but little interested in the matter. He is little concerned with such devices. This, however, is not all. While we are thus in artificial fashion "motivating" the required map locations, we are doing more. We are respecting these children as persons. We are helping them to live more richly by going with Stanley and Livingstone and Roosevelt and Cecil Rhodes to Africa. We as teachers are encouraging the endeavors of our pupils, we are respecting their thoughts, we are helping them to do better certain wholesome things that appeal to all children. All of this is as far as it goes good project work. We are succeeding in the degree that we stir self-activity in our pupils and help it so to work itself out that the aims of the broader problem of method are met. This may not be the best form of project work—in the judgment of this writer it certainly is not the best form—but as far as it goes along the road of stirring child enterprise and enlisting child responsibility, just that far it is good project work. If there are very many and very unimportant map locations to be learned and the available time is very short, then we shall probably go but a little way toward our ideal project point of view; but if the prescribed items are really important and adequate time be allowed, we shall be able to go a long way on the road *toward* the ideal. The essential point is that we see the project ideal clearly—know really what it is—and then go as far *toward* attaining it as we feasibly can under the circumstances under which we work.

LEARN FACTS IN LIFE CONNECTIONS. In connection with the foregoing it may be well to say two other things, first about learning facts and second about drill. First as to facts: Bare facts standing alone are very difficult to learn—in fact it is hard, if not impossible, to say what it means to learn a fact by itself. But if we can learn our facts in thought connections—so that they cease to be bare isolated facts—we shall learn them much more readily and retain them much longer. We have then organized them with other pertinent material into living wholes. It is this point that Professor F. M. McMurry has so ably stressed in connection with learning through problems. We can join this point very directly to all that has been said about the broad problem of method. If we can so stir our pupils that they ask and answer worth-while questions we shall find that they are learning well under all the three heads of primary, associate, and concomitant learning. A good problem that the pupils themselves feel as a problem and determine to solve becomes for them at once a worthy project, a child enterprise. So then the good teacher will constantly be on the lookout to stir problems and enlist the pupils' endeavor in solving them. The number of facts that can be so learned will enormously outnumber those learned on the old memoriter method, so much so as to win support from even the most reactionary gradgrind, while the opportunities for thinking and accompanying active self-experience will commend themselves to the more forward looking. We wish then to use problems wherever they are suitable. Gripping, challenging problems will so arouse sustained endeavor as to lead to the most wholesome of learnings.

SOME DRILL NECESSARY. Now as to drill. There is no doubt that a certain amount of drill is necessary if we are to live efficiently, and everybody knows it. A young child will say one thing over and over again until all the grown people in the vicinity nearly lose their wits—and their tempers. He is drilling himself, but probably not with intent to learn. A little girl with a pair of new roller skates will practice inces-

santly till she learns how to use them skillfully. She is drilling herself, this time with conscious intent to learn. Her older brother who aspires to a place on the high school baseball team will practice throwing and catching balls and batting till there may be no time left for mother's errand. He is drilling himself. The boy's father who has taken up golf and finds trouble in putting will take a half-dozen balls and practice on any suitable green till those who have not caught the craze may wonder if he is losing his mind. He is not; he is drilling himself. And in each case it pays to drill. Without it, a low grade of performance; with it, increase of skill and satisfaction.

THE LAWS OF LEARNING AND DRILL. Drill holds too of the school subjects, with spelling, writing, reading, number combinations, writing poetry—in all these skill is requisite and for this drill is needed. The laws of learning hold in drill as elsewhere. We have already seen that to learn there should be (1) an attitude toward the thing such as will make success satisfying and failure annoying, then (2) such exercise as (3) will tell success from failure. In the degree that these conditions hold, in that degree will learning best take place. If, then, drill is to be efficient, it makes a great deal of difference how the child feels about it. The oldest way to give the desired attitude was to threaten the child with a whipping if he did not drill himself till he learned the thing. All very old-time pictures of schools give a prominent place to switches. And whipping was much in evidence. This we now think was a cruel way to make the child glad when he succeeded and sorry when he failed. But it is not simply the cruelty that modern education objects to. The resulting learning is not so good. While punishment may bring a certain degree of primary learning—if the drill work is simple enough—the associate and concomitant learnings are very likely to be bad. Children naturally dislike such schools and tend to dislike all that goes with them. The project point of view does not—as some seem to think—object to drill. What it wishes is that the child shall see the need for the drill and, with the

teacher's help, drill himself. If he sees the need for the drill his attitude can be both favorable and intelligent. Not only may he come to wish the skill, but he now has a better basis for understanding when he is succeeding. The laws of Readiness and Effect can thus work in connection with Exercise not only to make the drill more effective but at the same time to take better care of the concomitant attitudes. For surely we wish, for example, not only to teach children *how* to read, but even more *to* read, and even still more we wish so to teach our children that they may become ever more and more intelligent, responsible, self-directing persons.

WHAT TEACHERS MAY DO. Teachers, then, who are required by the course of study to do much drill work may still work *toward* the project point of view in the drill. So far as possible they will let the drill follow an understanding of why the drill is needed and if possible secure a wish for the requisite skill. Then they will explain how the drill will bring the skill and so arrange and present the procedure that the pupils may drill themselves. In the degree that the children can see and accept the need for better skill and then purpose the requisite drill and themselves conduct the actual operations, in like degree are we approaching the project point of view. It is, of course, true that the course of study may be so badly built that the child cannot feasibly understand what it is all about. If so, the teacher can make but slight approach to the project idea; but increasingly, curriculum revision gives more favorable conditions. Spelling, for example, is now being taught by methods that, more than formerly, admit of intelligent pupil participation, and so with the other drill subjects. Not that the experimenters with these drill subjects necessarily accept the project point of view—the contrary rather is true—but the scientific study of these subjects, even from the point of view of the narrow problem of method, is forcing practice to move toward a place that better meets the demands of the broad problem of method.

WORKING "TOWARD THE PROJECT POINT OF VIEW." Lest there be misunderstanding it may be well to say more ex-

plicitly what is meant by “working *toward* the project point of view.” In using these words it is assumed on the one hand that the old practice was mostly opposed to the project idea, and on the other that the teacher wishes to follow the project point of view but is hindered by ideas and practices coming down from the past which likely enough are still approved by some having power and influence. Under these circumstances we think of two things the teacher will do: first use as many of the project ideas as can properly be made to succeed under present conditions and, second, work to change these conditions as fast as feasible so as gradually to allow more and more of the project practice. One of the best ways of doing the second is to succeed with the first, for nothing spreads an idea like its success. When we speak, then, of working *toward* the project point of view we have in mind on the one hand a teacher who now sees farther than present conditions allow practice to go and on the other hand a gradual shift of affairs so as to allow more and more fully the use of the project idea. The teacher will then work *toward* the ideal first by exemplifying as much of this idea as is now feasible and, second, by persuading others to remove the hindering conditions. In such ways we hope to see education as a whole move *toward* the project idea.

Earlier we distinguished three things: (1) the course of study, (2) the social relations of pupils, and (3) extra curricular activities. Our discussion since then has been of the first alone. The other two will not require so much discussion, as much of the preceding will hold also of them.

SOCIAL RELATIONS OF PUPILS AND MORAL GROWTH. When we speak of the social relations of pupils, we enter the realm of moral education. With this the project point of view is most vitally connected. In fact the broad view of method, rightly understood, is mostly concerned with the moral education of children. We recall here the essence of the project point of view, that learning, all things considered, comes best when the learner is engaged in enterprises and experiences that he feels as *his* own, for the execution and success of

which *he* accepts responsibility. The word *responsibility* best perhaps of all single words points to the moral quality of action. If the child is to grow in morality he must grow in responsibility. He must see and distinguish continually better and better the results that flow from his acts, what the results are, and which are good and which are bad. He must more and more surely choose the good, and more and more certainly act out his good choices. Moreover each new gain must so register itself in habit that continually new gains are the better promised. The problem of moral education is how best to bring about such moral growth.

THE PROJECT IDEA THE ROAD TO MORAL GROWTH. Our contention is that the practice of the project idea is *par excellence* the road to moral growth. In it alone is pupil responsibility so stressed as to give under proper teacher guidance exactly the opportunities demanded for practicing the various constituent elements of the good moral character, as these are demanded at any rate by a democratic society. Pupil enterprises mean action, and practical morals are best learned in connection with action. Since enterprises mean results, here is the opportunity under wise teacher guidance to forecast and weigh the results likely to attend. Enterprises involve active choice and actual conduct, so here again is the opportunity to practice moral constituents. That the enterprise is the children's means a greater likelihood of their favorable attitude toward the moral results desired.

MISTAKEN FREEDOM. At this point a word of warning is necessary. Some shortsighted teachers, having heard that child enterprises furnish the best opportunity for building moral character, seem to think that just so the enterprise be the children's, then moral character is bound to be built no matter how the children behave. This is a sad mistake. True enough some sort of moral character is bound to result, but it may be a bad moral character. Whether good moral character or bad moral character shall result depends exactly on what is practiced and on how this is approved by the child. Our laws of learning hold here as everywhere else. If the child

does right and is glad of the right thing he has done, he is more likely so to act next time and so will tend to build the habit of doing that right thing. If the child does wrong and counts it a success and is glad of the wrong thing that he has done, he will with equal tendency build the habit of doing that wrong. The laws of learning are bound to act. The project idea is here better than the old practice for two reasons: first it gives more opportunity to practice the right and, second, under proper guidance it gives greater probability that the right will be approved. But the greater opportunity to do right often means a corresponding opportunity to do wrong. Here children need teachers perhaps most of all. While the child grows by his own acts, he can grow morally only as he himself forecasts the results of his conduct, distinguishes the good from the bad, and chooses to put the good into practice. Again *we* learn the responses that *we* make.

HOW MUCH FREEDOM? But if no higher outside help be available, the children's moral responses may very well not rise above the present level of their own insight. Especially where children have been held in check by autocratic teachers are they likely if suddenly given free rein to go to the opposite extreme and indulge riotously their new freedom. If this continues and they like it, they will build bad habits accordingly. We have then a measure of the freedom the teacher should allow, namely, as much as the children *will* use wisely. And how can we tell how much freedom that is? By observing the conduct that builds itself into habit. If children learn selfishly to disregard other people's rights and feelings, then something is wrong. They are not using their freedom wisely. This then is always our test: What kind of habits are your children building? If good habits, go ahead; you are on the right track. If bad habits, something is wrong; study the situation to correct the evil.

WHAT SHALL THE TEACHER DO? We are now ready to return to the teacher who is hampered by authorities or parents in carrying out the project idea; and our inquiry is on the social relations of the pupils. How can a teacher, in spite of

hindering conditions, still use the project idea in moral education? The answer is the same that we found under the course of study. No matter how tied down the teacher may be there is still opportunity to work *toward* the project idea. First is the way in which the teacher deals with the children. Whatever be the regulations, the individual teacher as a rule determines in the greatest measure his or her own personal attitude toward the pupils, the way of speaking to them, whether pleasantly or not, whether respectfully or not. Some will be surprised at the word "respectfully" as here used with regard to children, thinking possibly at first that respect is one-sided only. But of course such is not the truth. In fact respect for personality comes very close to summing up the whole moral law. Even when a child has done wrong, we still respect him. We do not respect his wrong act, but we respect him as having in spite of this wrong act still some good in him. We respect the higher self that we know he has. And whatever we may do about the wrong act, we think always of the good self and punish the child only in such a way as will best promise to develop this better self.

WORK FOR ACTIVE RESPONSIBILITY. But punishment must not be overemphasized. Each year it grows less and less significant in moral education. It is positive activity that best builds character. Each person has many and varied possibilities. We must respect the child's personality in the sense of appealing always to the highest feasible motives. By so doing we may hope to build him up as one who responds habitually to higher motives. Sad to say, some teachers and parents take the contrary course, suspect worse of the child than he is, and so build in him a lower character. Especially shall we seek to call into play the children's active responsibility in matters of conduct.

THE GOOD EFFECTS OF GROUP ACTION. We may think of a scale here: at the lowest mere obedience to the teacher's command, without seeing the why of it all; a step higher is an understanding obedience, the pupils see why the teacher so commands; highest, the children of themselves decide to

do the right thing and accept responsibility for enforcing their decision. The good teacher will strive to go as high in this scale as is feasible. Possibly as high as most teachers can go with most classes is, in an instance of moral stress, to lead the pupils through questions and discussion to reach a decision that the teacher can approve. But even so, the character effect is much better than if the teacher had merely commanded what should be done: the *children* have canvassed the situation (such thinking will help next time), *they* have judged (even if the teacher had to help), and *they* have decided. Now that they so decided, they are much more favorably disposed toward doing the right thing than if the teacher had commanded (older children especially resent bare commands), and when they act rightly they are more pleased with what they have done (it is their responsibility). We thus better utilize readiness, exercise, and effect—all three. The desired learning better takes place. If one boy is not disposed to abide by the group decision, the other boys are now less likely to side with him. In fact, if the teacher be tactful, the group will condemn both offense and offender; seldom can a boy hold out against his fellows. As much then *as feasible* the wise teacher will enlist the group responsibility in all matters of conduct. Thus again does the teacher work *toward* the project point of view.

THE NEWER SCHOOLS HAVE BETTER MORAL OPPORTUNITIES. We can see at once that the old-fashioned course of study emphasizing drill and memoriter work lends itself less well to the development of active moral character than does a régime of pupil enterprise. In the latter the social dealings of pupil with pupil—and also of pupil with the larger world about—are more frequent and more lifelike. Better exercise of social qualities is had, and natural incentives to proper social conduct are more probable. If a child group is putting on a play for the rest of the room, Mary's failure to practice is resented by the rest of her group, as is also John's failure to learn his lines; and the class too as a whole when it knows the situation will add its disapproval. The offender

is brought to see his wrongdoing and to regret it. But we are not dependent on the new type of school. Whatever the school and however formal it may be, the children will have some social dealings with each other and with others. In all of these the good teacher will work *toward* the highest feasible group responsibility for a proper group behavior.

PROJECT APPROACH THROUGH EXTRA CURRICULAR ACTIVITIES. Our third line of possible progress was in extra curricular activities. Here again the newer type of school will have the advantage, but in even the most restricted school there are some opportunities for extra curricular activities. One way is to encourage clubs along subject-matter lines. For older children a mathematics club may be a powerful adjunct to a narrow curriculum. Some schools find poetry clubs feasible. A debating society is often highly successful. A school paper can be made very valuable. Often the local paper will give a column or more to the school. Project work begun in this fashion outside of class work often works its way into the regular class work. As all such activities are clearly pupil enterprises, all that has been said about the better learning is directly applicable here. As elsewhere wise guidance is necessary for best results. In the matter of morals, nothing new need be said. Pupil enterprises are the key places for building character. Too often are they left to the unobserved leadership of the more aggressive young people. The danger then is that low standards may become fixed. Sometimes, as in athletics, an adult coach of low standards will do great harm. Nowhere else are all the various learnings more actively got than in extra curricular activities. The wise teacher will so use these as not only to improve the learnings but also to show abroad what good learnings can come through a régime of purposeful activity. This is a very promising line along which to work toward the project idea.

THE PROJECT APPROACH THROUGH "FREE WORK PERIODS." One last word as to introducing the project method. Many teachers begin by getting permission for a "free work period," perhaps of no more than a half-hour a week. It is

certainly a very rigid elementary school program that cannot yield this much. Having obtained permission the teacher will then say something like this to the class: "We are going to try a free work period of a half-hour a week. If it succeeds, perhaps it will be extended. In this period you are free to undertake almost any worth-while thing you like, either singly as individuals or together in groups. The only conditions are, first, that you must get my approval on what you propose and, second, that you must go about it in earnest. At first you may have difficulty in thinking up something to do, but I'll help you and if necessary will tell you something to do. Everyone, however, must be busy at something." This plan allows at small risk both teacher and pupils to try themselves out along the line of the project idea. Under reasonably favorable conditions the half-hour will soon be too short. Either the time will be extended or projects begun there will be carried over into class periods or finished out of school time. There is no better way for making a small and safe beginning of real project work.

SUMMARY. Thus ends our discussion. As we look over the ground covered we see that the project point of view is the plan of basing education, as far as feasible, upon active enterprises in which the learner feels the enterprise as his own and accepts responsibility accordingly. We believe in such a régime chiefly because in this kind of responsible activity the psychological laws of Readiness, Exercise, and Effect are best called into play. When we consider that any child is at any time necessarily learning many different things, we have a new and broader conception of method as the way in which we must manage a total situation so that all the simultaneous learnings may be best. The project idea seems to promise best as a solution to this broader problem of method. In particular it promises to take especial care of the very important attendant attitudes that are thus always being built.

WHAT WE SHOULD PRACTICALLY DO. We have seen further the many difficulties attending the introduction of the project procedure, but we have also seen that no matter how

difficult the situation, a teacher who believes in the project idea can still go forward *toward* the full project practice. Even the ordinary course of study, no matter how fixed, yields some possibilities of introducing in some measure both the project spirit and project practice. In the social relations of the pupils, however prescribed these might be, there were still found opportunities for such respecting of the personalities of our children as would move our management and their conduct farther up the line toward better things. Extra curricular activities promised definite help, as did the "free work period."

HOW TO PURSUE AN IDEAL. Nor need any feel that we have been too ready to yield to indefensible opposition. If only we could, we should go as far as did Collings with his experiment; but because we cannot at once attain an ideal we need not therefore conclude to do nothing. Life as we know it seldom offers "all or none" alternatives. Progress comes by degrees. The project ideal in education may be considered like the democratic ideal in social and political life or like the Sermon on the Mount in morals and religion. In other words, an ideal may be practically inexhaustible. Even so, we should begin where we find ourselves and work as far as we can toward it. Indeed an ideal is good in the degree that it points our direction and tells us what to do next. To take the next step even though it be but a short step is no disloyalty compromise, rather is it the only practical loyalty. Our duty is to go in the direction of our ideal as far and as fast as we can. To do less or to pretend to do more—either is disloyalty. Any teacher, no matter how hardly placed or straitly hemmed in, can still be loyal to the project ideal by going as far and as fast as possible toward the inexhaustible project practice.



[EDITOR'S NOTE: For projects developed in these volumes see in Index, *Projects*.]

PRINCIPLES AND CHARACTERISTICS OF GOOD TEACHING



By

EMMA B. GRANT MEADER, A.M.
Instructor in Elementary Education
Teachers College, Columbia University

PRINCIPLES AND CHARACTER- ISTICS OF GOOD TEACHING

CHAPTER ONE

THE APPLICATION OF THE DOCTRINE OF INTEREST

WHILE poets may be “born and not made,” teachers are both born and made. With a reasonable amount of intellectual ability, average physical and mental health, good morals, industry, the capacity for growth, and with a fairly pleasing and positive personality the ground is broken for producing a good teacher. It is possible that the superior, brilliant teacher will have more success factors than these or larger amounts of several of them—personality, for instance. This may put her in the “born” class, though proof here is wanting. Good teachers may be made.

Three reasons why teaching is often poor stand out clearly, but in no sense hopelessly. They are the gap between principles and practices in teaching technique; the blind dependence on “devices”; and the mental crystallization of teachers.

THE GAP BETWEEN PRINCIPLES AND PRACTICE. The student in the normal school takes the prescribed course in “principles.” These principles may be called principles of

teaching, principles of method, principles of education, or principles of psychology. The student may take a course called principles of teaching in one normal school and find the content of a course by the same name very different in another school. So long as she is concerned with this course as a mere body of book learning on which she will be examined for credit, this variation in content matters little. It is when an attempt is made to apply these principles that she soon becomes aware of serious difficulties. One of these difficulties presents itself during her training. She discovers that the "subject-matter" teachers, and often the "education" teachers, pay but little attention to these teaching principles. Lesson plans carefully made in teacher-training classes are never used in actual teaching. The problem idea may be preached but the method of question and answer on the textbook prevails. She memorizes the laws of learning but sees them used in a manner far removed from genuine interest or satisfaction.

In her own schoolroom, and as she meets other teachers, she finds that the term "principles of teaching" has a different meaning with different teachers. Often it seems too formidable and academic for discussion. Vaguely, the teacher feels that it is not practical. What is the result? She may become a good teacher because she is partly born and partly made, or because she hits upon a series of workable devices by a trial-and-error process. She rarely knows just why these work, but that lack of knowledge does not disturb her unless she is fortunate enough to be introduced to a broader view. The broader view goes back of every device, selects or rejects it according to the best accepted doctrines of good teaching. She knows, knows why she knows, and can tell others about it. At this point she is passing from the good teacher class into the superior class. She is more than the artisan. She is the artist teacher.

THE BLIND DEPENDENCE ON "DEVICES." Normal schools of a former day are partly responsible for the teacher who depends on too many extraneous devices. The student who

proudly exhibits her notebook collection of one hundred devices for word drills is equipped for a good spurt, but not necessarily for growth in teaching reading to different pupils of different needs under new, changing methods. With her devices, which may be very good prescriptions, she needs good principles that enable her to test these devices, to make new ones, and to discard many, as science points the way to needed changes. A prescription is to be used in curing a certain ailment. When the ailment changes or the patient is cured, the prescription needs to be changed or discarded. A bean-bag device may be very useful as play and defeat the purpose as arithmetic. Is the play the thing, or the addition in scoring, or the desire to learn more about addition or more about skillful bean-bag throwing? The principles of teaching involved are those of focalization of attention, genuine and permanent interests, memorization, the time element in learning, economy in learning, and the life needs of arithmetic. If so many possible principles of teaching may be discovered in a small bean-bag device, it should be an interesting and profitable project for any growing teacher to check her devices by the principles involved.

The superior teacher uses devices. These devices are based on fundamental principles of teaching. Such a teacher knows not only the device but also the principle which justifies its use. The average or medium teacher too often knows both, but effects no union of her knowledge and behavior. If the poor teacher has one of these tools, it is usually the device.

MENTAL CRYSTALLIZATION OF TEACHERS. Mental crystallization works against good teaching. This crystallization has nothing to do with chronological age. It may occur at sixteen or at sixty. It is no respecter of persons as to social prestige, physical charm, political pull, college degrees, or financial recompense. It is the inability, first mental and later also physical, to act on new idées. Often it is inherent, and the conservative individual only follows in his ancestor's steps. But with many teachers it is acquired, rather than a part of her original nature. Twenty years after normal-

school graduation some teachers are teaching reading in the same way that they did the first year. They secure what *they* call good results, and fight nothing but change. Their mental attitude also shows itself in physical things. They wear their hair the same way, eat the same kind of salads, order the same soda fountain drinks, avoid summer schools, and visit the same summer resorts with relatives. What has this to do with newer ideas in teaching? Simply this—the introduction of these ideas in a school system results in one of three things in the case of the crystallized teacher: She drops out of teaching, she is left to her own devices, or she gives “lip service” only to new ideas. She may agree with the supervisor, talk well in a vocabulary born of book knowledge, but she teaches exactly as before. Such crystallization is a factor with which we must always reckon. The teacher who wishes to grow in good teaching power must grow each year that she teaches. Such a teacher need never fear mental crystallization.

Let us grant, then, that a small number of teachers are “born teachers,” a larger number are born and made, a goodly group are made, and a few are hopeless. The “born” teacher and the born-and-made type constitute the superior groups. They wish to know the characteristics of good teaching in order that they may improve their own technique and also that they may help other teachers. They are to become the leaders. The “made teacher” wishes to improve her teaching so that she may soon pass into the higher groups. The poor teacher must strive to practice better teaching technique or drop out of the profession.

SOME PRINCIPLES OF TEACHING ILLUSTRATED. Good teaching, like good work in any field, is based on fundamental principles of the teaching art. If followed, these principles make of teaching a great art. These foundation steps have been given to us by great teachers who have tested them by results. Often they are discovered by observations of classroom teaching. Perhaps the safest principles today are those that come as the result of careful, exact, controlled experi-

mentation. Psychologists do not accept a principle until the experiment has been verified in many cases. In this way they guard against the error of depending on personal opinion and experience, which is a very fallible criterion. The doctrine of interest is so basic that it should receive attention before any discussion of the characteristics of good teaching.

THE DOCTRINE OF INTEREST

Interest is the basis of all economical learning, just as interest in achieving is the root of all worthy striving in life. The will to be, to do, to live, to rise higher is derived from the principle of interest. To be genuine this interest must not be forced by improper devices. These outside means often play their part as original "starters." But interest must be a stimulating and abiding motive residing in the thing itself.

Interest must not be confused with mere amusement or even with pleasure. A child may be amused with a ladder or wheel device for learning words. He may get pleasure from "climbing the ladder" and scoring a point for his group. This does not become genuine interest in the educational sense until he is interested in learning the words so that this learning may assist him to read. Finally, when the reading interest increases and becomes a permanent and abiding motive, the learner needs no device, no coercion, no teacher.

Dr. Dewey in his *Interest and Effort in Education* refers to the "unified self." In this unity of the inner self with the outer activity he finds no strain. There is no attempt on the part of the self to pull away from the task of reading, studying geography, making a kite, figuring a budget, adding columns of figures. Each task is unified with each learner because of the learner's genuine interest. This may sound too Utopian to the classroom teacher. Perhaps it is for all the children all of the time. In life outside the schoolroom, however, we find people moved by great impelling motives. Those who are compelled to work under coercion or who watch the time clock or who work only for the pay envelope are

examples of what is meant by interest that is not genuine. Interest, pleasure, amusement, even happiness, come to many people outside of work, often in excitement. Children in school need to be trained in permanent, abiding, genuine interests in worthy things.

To those who feel that interest should be forced for the sake of a future goal or that this philosophy leads to a "soft pedagogy," we may say that in the case of a normal child in school there is no such thing as work without interest. If he works and is not interested in the work, he is interested in avoiding failure or in getting out of school on time. He may be interested in the day when he shall never have to study that subject again. This is the tragedy of false interests. The child closes the book forever after his last examination.

To make this doctrine of interest a working one, to arouse and maintain genuine interest, the teacher needs to be familiar with three important corollaries which may be considered as doctrines of teaching. In outline form they may be stated thus: Interest is aroused and maintained by

1. Utilizing the instinctive interests of the learner
2. Utilizing the laws of learning
 - a. The Law of Readiness
 - b. The Law of Exercise
 - c. The Law of Effect
3. Utilizing experimental evidence with regard to individual differences

UTILIZING THE INSTINCTIVE INTERESTS OF CHILDREN

Our original nature is the sum of our reflexes, instincts, and capacities. This nature is ours by reason of near and remote ancestry, sex, and—quoting Dr. E. L. Thorndike—"unknown causes of variation whereby children of the same parents receive differing inheritances." This original nature becomes modified by maturity, training, and environment.

The following instinctive tendencies are almost univer-

sally found in normal children. They vary in duration and intensity at different stages. They are divided into three large groups according to Dr. Arthur Gates in his book, *Psychology for Students of Education*. One of these groups includes instinctive responses to bodily or organic conditions. This includes such responses as eating, drinking, breathing, resting, sleeping, etc. A second group is made up of instinctive responses to objects or events in the environment. Here are placed gross bodily activities such as walking and climbing; also manipulation, vocalization—as weeping, laughing, rhythmic sounds—overcoming obstructions, mastery, fighting, submission, collecting, and hoarding. The third group is composed of instinctive responses to the presence and activities of other human beings. This group includes the social tendencies.

To these instinctive tendencies we may add *curiosity* which, though a native trait, shows itself in so many activities that it becomes very complex. It is the basis of the impulse to learn. It is fortunate for education also that mental activity, “just to have sensations,” is likewise intrinsically satisfying. Play responses may be considered as a phase of manipulation, of curiosity, of acquiring, of competing, of fighting, and of other tendencies. In fact, Strayer and Norsworthy in *How to Teach* say that play is “an outgrowth of the general characteristic of all original nature towards activity of some kind.” They also characterize play as “simply the manifestation of instincts and capacities not immediately useful to the child.” They take the stand that when play becomes “immediately useful,” it perhaps should be called work.

Let us see a few practical ways in which a teacher may utilize this array of native tendencies.

THE USE OF RESPONSES TO BODILY OR ORGANIC CONDITIONS. Primarily, these responses should be cared for in the home. The school cannot neglect them, however, for aside from establishing physical habits, they often lie at the basis of mental health. So in the kindergarten and primary grades

we find the luncheon hour, the quiet, silent moments, and sometimes the afternoon-nap period. The modern primary teacher knows that for the poorly nourished or overfed child there can be little genuine interest in anything but his body. Close touch with the school nurse and physician, and through them with the home, is imperative for good teaching results. Adjustable seats, movable furniture, good lighting and ventilation all become interest factors when viewed by the teacher who makes her psychology of interest function. (See also *Health and Physical Education*, p. 335, and *Modern School Buildings and Their Management*, p. 447.)

THE USE OF RESPONSES TO OBJECTS OR EVENTS IN THE ENVIRONMENT. Instinctive interest in gross bodily activities has given us various forms of apparatus both in and out of schoolrooms. In the modern kindergarten we find the slide, the ladder, the giant stride, and large floor blocks. For older pupils these are modified, enlarged, and augmented in the gymnasium or on the playground.

The response of manipulation. Contrast the traditional old-fashioned school with the modern type with regard to the instinctive responses of manipulation. In the older school, materials, and even books, were kept on high shelves in locked cabinets, so that the "children-do-not-handle" order could be easily obeyed. There were no temptations to manipulation. Long rows of screwed-down seats, often extending close to the teacher's desk and the side walls, precluded the possibility of long low worktables for manipulating clay, sand, books, paste, scissors, paper, tools, wood, and similar materials. True, these were sometimes used on top of the desks but only in a mass formation by dictated work. All children at one time worked on one type of material regardless of whether their instinctive interest, capacity, or need demanded it. This was coercion, not manipulation, for many children.

The modern schoolroom uses manipulation not only in the sense of constructive materials but also in the meaning of manipulating books, maps, dictionaries, encyclopedias,

current magazines, the atlas, and many other aids to mental activity. This manipulation goes hand in hand with curiosity and leads to a desire for more manipulation in order to satisfy more curiosity, in order to know more, to use more, to live more richly through worth-while activities.

The schoolroom should reflect a working attitude. It needs to be a proper combination of the well-ordered home with the busy workshop or the good library. Some schoolrooms are in such perfect order that a visitor feels as though he were in a certain type of home. It is the kind where the wife has confused housekeeping and homekeeping. Magazines are uncut or placed in perfect and classified order, not a scrap of paper or dust is visible, not a curtain or rug is askew, not a pot, pan, or kettle but has its own hook and stays there. The fact that they all stay there is the trouble. Neither this type of home nor an analogous schoolroom gives one the desire to work or achieve.

The response of vocalization. Psychologists tell us that out of the needs of life, vocalization has become speech, song, and even story. So we have language, music, stories, and poems in our schools today. To train children to listen courteously, to keep silent when another is speaking, and to obey all the amenities of the fine art of conversation represent one of the aims of a truly modern school. The recitation during which the teacher does all the talking and pupils speak only when the royal scepter is put forth is not based on the instinctive interest of children in vocalization. Children need to work in committees, to be leaders or followers in various situations, to express rather than repress opinions, and to be guided wisely. Wise guidance here means leading children in collecting facts before expressing opinions, often withholding judgment, and always remembering to be courteous.

The response of mastery. The answer to those who criticize the newer doctrine of interest as being too soft a pedagogy may lie in the psychology of overcoming obstruction. Teachers who understand that overcoming an obstruction

is often a satisfying activity will not wonder when John perseveres with a long division problem till he gets the answer and then asks for more such problems. If he asks to do arithmetic instead of copying a flower in the drawing period the teacher may dare to let him attack the new arithmetic problems even during the drawing period. To let pupils know that a task is not easy, but very difficult, need not kill their interest. If rightly used, it spurs them on. Success in small steps along the way and clearing difficulties for the next forward move precludes a loss of interest. A teacher of experience does not start long-division instruction with the most complex examples. Neither does she "Pollyanna" the pupils by assuring them that long division is as easy as short division. She faces the facts with them.

When the obstruction is overcome, the thrill of mastery is great. Never to have the response of mastery in the best sense makes of the child a weakling and may later contribute to an "inferiority complex" or a "suffering hero" type of personality. Submission on the part of a bully is often necessary. It is needed, too, where a certain brand of egotism is developing. But mental and physical submission have been too long the watchwords of schools which are not based on the modern idea of interest.

Fighting is at its basis an instinctive response. Physical fighting is the lowest level. In "bullying a bully" it is sometimes the only appeal. Soon, however, fighting must rise from this level to fighting for a principle, for the right, for an ideal, for mastery over self, for achieving worthy goals. Group competition should take the place of individuals pitted against one another. The first-grade child starts on the individualistic plane. He wants to see his name on the board for a score. The fourth-grade child should be led to desire the score for his row, group, or school. In ever-widening circles this competition should increase to include more than our own family, near relatives, city, state, or even country.

Collecting and hoarding responses. The collecting and hoarding responses are used in school when children make

booklets, collect and classify flags, stamps, pictures, rocks, animals, or list scores in athletics and schoolroom games. The wise teacher or mother not only allows the collection but also encourages and assists in classifying it so that it contributes to useful information. A schoolroom in which work of this character is done need not be a cluttered one.

THE USE OF RESPONSES TO THE PRESENCE AND ACTIVITIES OF OTHER HUMAN BEINGS. The third large group of instinctive tendencies has to do with children's responses to the presence and activities of others.

Parental responses. These form the basis of kindness, philanthropy, welfare movements, or any aid given by the strong to the weak. The primary child dresses and cares for the doll, plays keeping house, and should learn to care for pets. To respond heartily and unselfishly to all who need material aid or a word of sympathy is part of the duty of a worthy citizen. If this is a native interest, the classroom teacher will do well to build upon it early.

While it is true that people may be gregarious and yet unsocial, the gregarious instinct is the basis of many social responses. The give-and-take of ideas in group discussions is essential. The committee decisions even of kindergarten children should be encouraged. The teacher who is the master mind, who makes all the decisions, who prevents initiative, who requires responses to her alone builds on an individualistic foundation. It is rarely conducive to cooperative group enterprises. Life itself is a group enterprise.

Responses based on the desire for social approval. The desire for social approval is a native trait. As with all instinctive responses, it should be raised from lower to higher levels. Too much satisfaction in social approval may bring a child to adult life with only selfish desires. He may so greatly desire compliments, praise, or approval that he commits crimes in order to satisfy the desires. Diamonds stolen, pleasure automobiles in exchange for mortgaged homes, and fine houses under debt shadows are some of the tangible evidences on the part of adults for social approval.

Social approval, like competition, needs to pass from the individualistic level to the approval of the inner self for the good of the group. The approval interests normally develop from a desire to please mother, teacher, the gang or group, one person—often of the opposite sex—to a desire for the approval of society at large. A mother often feels that the small child cares more for what the teacher says than for her own counsel. The primary teacher may expect to secure interest and willing obedience because the child at this stage usually longs for the teacher's approval.

This same teacher if transferred to a seventh or eighth grade will make a serious mistake if she depends on this same type of approval. If the child is a normal boy, he cares more for the approval of his gang than for the teacher's praise, especially if she gives it to him in the presence of his gang. The normal girl of this age desires the approval of her group or "set." A confusion in raising approval levels as maturity comes, gives rise to such terms as "sissy," "mother's apron strings," "teacher's pet," "spoiled darling," and later, "egotist," and "conquering hero." The victim of these epithets is less to blame than those who fashioned him thus by wrongly developing his natural interests.

UTILIZING THE LAWS OF LEARNING

The second rule for using the doctrine of interest is concerned with the laws of learning. Most psychologists take as the basis of the laws of learning the hypothesis known as the reaction hypothesis. We are indebted to Dr. E. L. Thorndike of Teachers College, Columbia University, for the statement of this hypothesis as a basis for these laws of learning. Dr. Arthur Gates in *Psychology for Students of Education* says, "The (reaction) hypothesis is this: All forms of human behavior, whether muscular activities, such as those of grasping, striking, or speaking; glandular activities, such as the secretion of tears, saliva, or gastric juices; or mental activities, such as perceiving, imaging, remembering,

thinking, or reasoning are reactions to definite stimulation. This may be called the *reaction hypothesis*." Without this understanding any discussion of the laws of learning lacks foundation.

Many things happen to us. Or, psychologically speaking, we have many reactions. Some of them we try to avoid or discontinue. They give us annoyance, not satisfaction. Some of them we welcome and desire that they continue. They give us satisfaction, not annoyance. Neutrality here is psychologically a doubtful factor. By our original nature we like certain reactions. We do not have to be taught to get satisfaction from a drink of cold water when we are thirsty. By the same token other reactions are originally annoying. The disapproving glances of our associates are annoying from babyhood to old age. Having received satisfaction from a reaction, we tend to repeat the activity so as to secure again this pleasure tone. The more we repeat it the easier it becomes for the stimulation to bring the desired response. The converse of this is true with regard to annoying reactions.

Can this fundamental and basic hypothesis become a working policy of good teaching? Is it old, is it new, or just freshly stated? Perhaps it is the last. In analyzing the success of good teachers, we find that the practice of these laws of learning has been a great contributing success factor. The superior teacher who often unconsciously uses them needs to be able to state and explain them and to illustrate them concretely for herself, her pupils, and for other teachers. The average teacher needs to practice them more. The poor teacher is often poor because she has no glimmer of the light they may throw on her few successes or her discouraging failures.

A teacher who ignored the laws of learning once said, "I do not care whether the pupils like the work or not. They must learn the facts, be examined, and make good grades. I make it so hard that there are many failures. I believe a good teacher fails a great many pupils." She was a teacher of English. Few of her students developed a love for her sub-

ject that carried them to libraries after they finished her course, and even those who did, said that they developed this love at home.

The type of teacher who practices the philosophy of satisfaction, of interest, of joy in overcoming obstructions, of annoyance for bad habits, tests her success in a different way. She knows that her skill as a teacher is best shown when the children are away from her. It is shown by what these pupils do when she is not present as a result of what she did when she was with them. Did she read to little children a number of Robert Louis Stevenson's or Arthur Milne's or Rose Fyleman's poems, beautifully and understandingly? Did she without comment put these books on the small reading table in the schoolroom? Did pupils voluntarily go there to read or even merely to handle the books? Did the librarian a few blocks away wonder what press agent had been at work for these authors? Did the parents ask the name of the book that Johnny wanted for Christmas? There is a wide gap between these two methods; which one is used makes a tremendous difference in the present and future lives of those who are taught.

STATING THE LAWS OF LEARNING. The three primary laws of learning based on this reaction hypothesis have been variously stated. In an interesting book called *Twenty-five Years of American Education*, by Dr. Isaac Kandel, Dr. William A. Maddox defines them as follows:

Concerning the Law of Readiness he says, "It is the degree of strength of our desire to respond to a demand for action, depending upon our interest, physical state, and preoccupation."

He says of the second law, "The Law of Exercise, sometimes called The Law of Use and Disuse or the old 'ever learn to do by doing' habit, is determined by the lack of it."

And he explains the Law of Effect—satisfaction and annoyance, or success and failure—by saying, "We learn best that which gives satisfaction or pleasure; annoyance weakens learning or connections between the neurones."

The Connecticut State Board of Education has a very illuminating basic monograph written to accompany the State Courses of Study. This monograph states the laws of Readiness and Effect as follows:

Stated in simple language, *the law of readiness* would read somewhat as follows: When a child wishes to carry on any schoolroom activity, to be allowed to do so is satisfying to him and to be denied the privilege is annoying. For example, if a child wishes to complete a project, and its completion depends upon knowledge which must be obtained from a book, to read that book is satisfying to him. *The law of effect* is a continuation of readiness and states that if the result of an activity is satisfying to the child he will want to repeat it.

UTILIZING EXPERIMENTAL EVIDENCE WITH REGARD TO INDIVIDUAL DIFFERENCES

TRADITIONAL METHODS OF HANDLING THE DULL AND THE BRIGHT CHILD. We can all recall the pictures in old books on teaching, or indeed we can find modern cartoons, in which a child sits in the corner with a dunce cap on his head. The teacher is usually scowling and the other pupils are pointing with scorn at the victim. Everybody but the dunce seems to take the attitude that the dunce *could* learn if he wanted to. Therefore disciplinary measures in the form of the rod or ridicule are used to overcome his so-called stubborn resistance to acquiring facts from books.

Later on in educational history, more positive measures were substituted for these negative punishments. The bright child was lauded to the skies and constantly referred to as the model toward which the dunce might strive for a similar perfection. "What man hath done, man can do," was preached with no doubt in its attainment. True, there were some disconcerting facts to face. Many wealthy parents gave their children the benefit of fine music masters, foreign study, leisure hours, good food, and fine surroundings, but Paderewskis, Elmans, and Kubeliks remained one each. The

opposite also occurred. Out of obscure surroundings came poets, sculptors, captains of industry. Given a family of four children with the same mother and father, the same type of food, clothing, shelter, school, books, friends, opportunities, and only one child shows any desire for a college education, or for a rich life of striving and growth. The environment was identical; was the original nature different?

Teachers used to spend hours after school trying to bring the slower, duller pupils up to the course of study standard for the medium or the bright children. The bright child was too often neglected. As one teacher said, "He is so bright in his work that I do not have to pay any attention to him. He takes care of himself." A few teachers realized that parents or remote ancestors had failed to supply the dull pupil with the particular abilities that the school requires. The dull pupil was usually a nagged, unhappy one, or a rebellious, tempestuous one. If he could have been placed in a group more suited to his own ability, the striving might have seemed more hopeful to him. He was not so dull but that he gradually saw the futility of struggling to reach the upper circles of brilliancy. A contempt for those children who occupied seats of intellectual enthronement soon made him desire to quit school and earn some money. At least there were near and more tangible rewards for him instead of useless striving. So the situation often came to look to the slow child.

CLASSIFICATION AND THE USE OF STANDARDIZED TESTS. What of the bright child? He should become a leader, but prodigies are seldom anything but social misfits. He may become merely an egotist incapable of adapting himself to the suggestions of others, and the brilliancy of his mind may serve only to isolate him from his fellow-men. The picture seems rather dark and the rule of mediocrity bids fair to become a surety. But for the dawn of a better tomorrow we are most surely indebted to those pioneers who have shown us the way to classify these various abilities. Classifying is the first step. Then follows a careful study of the individual

child and the application of correct remedies to meet his needs. The dunce cap may not be removed in all cases, but the scowl grows less on the teacher's face and the fingers no longer point with scorn. Better still, the dunce looks happier because he is more hopeful.

Whatever may be our attitude toward the use of standardized tests in the schools, we can never return to the reliance on the personal opinion of parents, teachers, or superintendents regarding the child's ability or achievement. This "pedagogical ranking" has to be considered, but always with other more reliable and controlled factors. It is the wise, progressive, and scientific teacher who supplements her personal opinion with an intelligence test, standard reading, spelling, arithmetic, or other achievement tests, and in the light of this knowledge regroups her pupils. It is understood that this regrouping is for the purpose of adapting the work to the varying capacities of her pupils. In large crowded rooms we often cannot handle more than three groups. These have various names. They may be called the Rapid Advance, the Medium Rate, the Slower Moving group, or they may simply be named the one's, two's, three's, or the A, B, C groups, or the X, Y, Z's.

There is an interesting chapter in the *Fourth Yearbook of the Department of Elementary School Principals*, National Education Association. It is called "The Bright Pupil—An Enriched Course in Place of Acceleration." The doubtful practice of "skipping" a grade merely on the basis of proficiency in tool subjects is a problem that proves likely to be solved by the enriched course idea. This necessitates educating the superintendent, principal, supervisor, and the classroom teachers to the new plan. It is a reorganization which to work well must be accepted finally throughout the system. In providing for individual differences we must do more than test children and put the tests on a shelf or send the records to a research bureau. After testing, we must diagnose, facing the individual needs of each child and, like the conscientious physician, apply the right remedy. Then,

indeed, will classification contribute its part to the improvement of teaching. (See also *Classification of Pupils*, p. 85 of this volume, the same subject in Vols. II, VI, and *Provisions for Individual Differences*, Vol. X.)

BOOKS FOR ADDITIONAL READING

Basic Monograph to accompany Connecticut Course of Study. Hartford, Conn.: State Department of Education.

CORNING, H. M. *After Testing—What?* Chicago: Scott, Foresman and Co.

DEWEY, JOHN. *Interest and Effort in Education*. Boston: Houghton Mifflin Co.

DICKSON, VIRGIL E. *Mental Tests and the Classroom Teacher*. Yonkers-on-Hudson, N. Y.: World Book Co.

FREELAND, GEORGE E. *Modern Elementary School Practice*. New York: The Macmillan Co.

FREELAND, GEORGE E. *The Improvement of Teaching*. New York: The Macmillan Co.

GATES, ARTHUR I. *Elementary Psychology*. New York: The Macmillan Co.

GATES, ARTHUR I. *Psychology for Students of Education*. New York: The Macmillan Co.

GRANT, E. B. "Motivating the Course in Tests and Measurements for the Teacher in Training." *Journal of Educational Method*, Vol. IV.

GRANT and WHITE. "Reading Interests Compared with the Content of School Readers" (Reprint of Teachers College Record articles). New York: Bureau of Publications, Teachers College, Columbia University.

HILLEGAS, M. B. *Stenographic Reports of Lessons*. New York: Bureau of Publications, Teachers College, Columbia University.

HINES, H. M. *A Guide to Educational Measurements*. Boston: Houghton Mifflin Co.

HOLLINGWORTH, LETA S. *Gifted Children*. New York: The Macmillan Co.

HOSIC and CHASE. *A Brief Course in the Project Method*. Yonkers-on-Hudson, N. Y.: World Book Co.

"Keeping Pace with the Advancing Curriculum." *Research Bulletin, National Education Association*. Washington, D. C.: National Education Association.

KILPATRICK, WILLIAM H. *Foundations of Method: Informal Talks on Teaching*. New York: The Macmillan Co.

LA RUE, DANIEL W. *The Child's Mind and the Common Branches*. New York: The Macmillan Co.

LINCOLN, EDWARD A. *Educational Measurement*. Philadelphia: J. B. Lippincott Co.

MOORE, ANNIE E. *The Primary School*. Boston: Houghton Mifflin Co.

PAULU, E. M. *Diagnostic Testing and Remedial Teaching*. Boston: D. C. Heath & Co.

PECHSTEIN and JENKINS. *The Psychology of the Kindergarten-Primary Child*. Boston: Houghton Mifflin Co.

PECHSTEIN and MCGREGOR. *The Psychology of the Junior High School Pupil*. Boston: Houghton Mifflin Co.

PENNELL and CUSACK. *How to Teach Reading*, chap. iii. Boston: Houghton Mifflin Co.

RUSSELL, CHARLES. *Class Room Tests*. New York: The Macmillan Co.

Twenty-fourth Yearbook of the National Society for the Study of Education, Part I—"Reading," Part II—"Individual Differences." Bloomington, Ill.: Public School Publishing Co.

CHAPTER TWO

CHARACTERISTICS OF GOOD TEACHING BASED ON THE PRINCIPLE OF INTEREST

WITH the doctrine of genuine interest and its corollaries clearly in mind, the next step is to find out some of the factors that condition the problem of teaching. While many characteristics of good teaching are summed up when we define genuine interest, it is helpful to break the problem up into smaller issues. The following may be listed as the more important essentials of good teaching. A detailed discussion of each except the last one will follow. The tenth essential, that of constructive discipline or control, is discussed at length in the article, Classroom Control, page 113 of this volume. The article, Routine and Record Factors in Classroom Management, page 173, may also be read to advantage in connection with this discussion.

1. Adequate preparation on the part of both teacher and pupils
2. A spirit of cooperation between teacher and pupils, and among the pupils themselves
3. Wise selection of subject-matter
4. A maximum of worth-while activity on the part of the pupils with the teacher as a guide
5. A desirable balance between individual and group activities
6. A consideration of individual needs, interests, and abilities of pupils
7. Provision for checking accomplishment and measuring progress
8. Provision for pupils to think for themselves when they have sufficient data, at the same time urging them to pre-

serve an open-minded attitude until they have all the data

9. Care to establish proper attitudes and ideals as well as proper skills and habits

10. Constructive discipline or control

ADEQUATE PREPARATION OF TEACHER AND PUPILS

Adequate preparation on the part of the teacher is likely to insure adequate preparation on the part of the pupils. This may not be so true at the beginning of the term when teacher and pupils do not know each other. This may also vary in any situation which might be listed under an emergency as in the case of a child who is unprepared for a lesson because of absence or lack of industry. We may assume that the teacher has done everything possible to get pupils adequately prepared up to the time the lesson begins.

The teacher's preparation may be divided into her more remote preparation and her preparation directly connected with the lesson to be taught.

MORE REMOTE PREPARATION. It is generally agreed among superintendents, principals, and supervisors that adequate training for one who is to teach in the grades should be graduation from an accredited four-year-high-school course plus graduation from some approved teacher-training institution. A suggestion, even a warning, needs to be given to those teachers now in the teaching profession under this minimal preparation. The tendency to require a bachelor's degree for grade teachers is growing very rapidly. The teacher without it can look well to her laurels and to her expected bonus, unless she definitely works toward a degree. She may or may not approve of always considering the matter of credit when she is choosing her summer school courses.

Perhaps teachers as a class have been too unselfish here. They return to their classrooms and their community with much knowledge and enrichment. They should be very sure that this work is taken for the various credits allowed toward

a degree. The degree is the only quick and sure way of telling people who do not know the teacher personally just what her preparation has been. Therefore, adequate preparation is an ever-growing, widening, liberating process. It is one of the reasons why teaching has, of all professions, the greatest possibilities of creative achievement. At least so it seems to have for the teacher who holds before her this vision of constantly improving her own standards of adequate preparation.

PREPARATION DIRECTLY CONNECTED WITH THE LESSON. Obviously, the teacher must know the subject-matter of the particular lesson to be taught, of the grade in which she is teaching, of the grade preceding and following hers, and a wide range beyond that. Unless she does know this amount, her subject-matter is inadequate. In addition, she must know children. She may have had good courses in the psychology of childhood, but she must know these children who sit before her and know them as individuals. She must further know the best technique for getting this subject-matter into the nervous systems of these children, so that forever after they are enriched because of this class period with her. They may have more knowledge; they may have more skill; they may have better habits started. Less tangible, though equally as vital, they may have changed attitudes, ideals, or appreciations. This is the daily task of thousands of teachers in ordinary everyday schoolrooms. The technique involves the following of some type of daily program and the making of some kind of lesson plan.

THE DAILY PROGRAM

The matter of the daily program is so varied today and has been so rarely submitted to scientific experimentation that to be dogmatic would insure little progress. Many schools use rather detailed inflexible programs and insist that the teacher keep a plan book on the desk where all supervisors who run may read. These programs are varied only to

GRADE III

A. M.		P. M.	
9:00- 9:15 Opening Ex.	Prayer—Song—Flag Salute— Memory Gem.	1:30-1:40	Songs and poems
9:15- 9:30	Visualize Spelling—All	1:40-2:00	Supplementary Reading—All
9:30- 9:50	Reading—B Class Study Spelling—A Class	2:00-2:10	Recreation—All
9:50-10:00	Recreation—All	2:10-2:30	Written Spelling—All
10:00-10:15	Music—All	2:30-2:45	Recess—All
10:15-10:35	Reading—A Class Study Spelling—B Class	2:45-3:15	Drawing or Industrial Arts
10:35-10:50	Recess—All	3:15-3:30	Literature and Language
10:50-11:10	Arithmetic—B Class Written Arith.—A Class		
11:10-11:30	Arithmetic—A Class Written Arith.—B Class		
11:30-11:45	Geography—All		

adapt them to the work of the special supervisors of art, music, physical education, etc. On page 265 is a fair sample from the page of a classroom program in a city of seventy thousand inhabitants.

The more elaborate daily lesson plans for arithmetic, reading, or geography, the list of words for spelling, the music from the supervisor's outline are all found on special sheets of paper or in indicated books, the location of which is given on sheets attached to this daily plan book. A substitute teacher would know exactly what to do. These books are made out one week ahead. Of course page numbers, words, etc., are filled in for each day. Typed forms are often used.

Now let us look at a few other plans actually in use. These plans represent perhaps the most flexible types. Here is one in which the day is divided into five periods.

- I. Planning Period
- II. Research Period (to find out)
- III. Activity Period
- IV. Recreation Period
- V. Drill Period

These periods do not necessarily follow this chronological order. They may be subdivided to meet the needs of the day's work. The detailed plans for each period are in many cases recorded after the work has been completed, instead of before.

Dr. Bonser in his book *The Elementary School Program* suggests in Chapter VII the following periods for a flexible daily school program.

- I. The Morning Conference Period (similar to planning in the preceding program)
- II. Constructive and Intellectual Project Period
- III. Drill Project Period
- IV. Recreation Project Period

In different schools various words connote the activities, but the teacher is allowed freedom in the time allotment under these headings. For example, English may appear on

a first-grade program and one hour may be devoted to it. Within that hour the teacher groups the activities as the needs demand. These activities may come under various names, as reading; spelling, phonics, word study, literature, language, story hour, picture study, oral composition, and others. Again, such a period as the art period may include music, drawing, industrial arts, museum trips, costume design, and so on.

Professor Annie Moore in her book *The Primary School*¹ gives us several free-type programs used in first grades. For example:

- 9:00— 9:40—Free Period. Chosen Activities
- 9:40—10:00—Check-up of work in free period
- 10:00—10:15—Recess
- 10:15—10:30—Group Assembly. Language
 - 10:30—10:50— { Reading—sometimes in two groups or more. Chil-
 - 10:50—11:10— { dren as leaders part of the time. If more than two
 - { groups, all work on reading; if two groups, one
 - { reads while other engages in seat work
- 11:10—11:30—Music
- 1:20— 1:45—Practical Arts (Industrial Arts)
- 1:45— 2:00—Group Assembly
- 2:00— 2:15—Recess
- 2:15— 2:45— {
- 2:45— 3:00— { Reading—one or two groups
- 3:00— 3:15—Story. Music

Professor Moore says, "One of the first steps in modifying the severe mechanics of the conventional program is to provide at least one long period of from thirty to fifty minutes a day in which the children may engage with some degree of real freedom in a variety of worth-while activities." Farther on, Miss Moore says, "The next step is to take the reading out of the narrow confines of numerous ten- and fifteen-minute periods, and get a longer stretch of time when the several groups will all be engaged in reading or activities related to reading." This quotation is quite as applicable

¹Annie E. Moore, *The Primary School*. New York: Houghton Mifflin Co.

to the work of the intermediate grades as it is to that of the primary grades.

Many classroom teachers would gladly use a more flexible program but the administrator fears to cut loose from the traditional type. A teacher who is willing to be judged by classroom results in knowledge, habits and skills, ideals, attitudes and appreciations may often convince her superintendent in favor of the newer plan. One way to do this is to show some such plans as these mentioned here. A wise administrator is glad to provide the opportunity for his superior teachers to become an experimental group.

THE LESSON PLAN

In addition to the daily schedule of subjects and activities, teachers in training and in service are accustomed to use some kind of lesson plan for each recitation. These vary from the elaborate five-formal-step plan of normal school days to two questions on a three-by-four-inch card, used by an experienced, superior teacher.

A large class at Teachers College, Columbia University, was discussing the subject of lesson planning under the direction of Dr. Frank McMurry and Dr. Milo B. Hillegas. After several forms had been discussed, Dr. McMurry presented his lesson plan for teaching this large class that day. He had carefully planned a lesson on lesson plans. It was written on a three-by-four-inch piece of paper, and, aside from mentioning the topic, it consisted of two vital, searching thought questions. He said he had spent about three and a half hours formulating these two questions. The ordinary teacher is perhaps unable to be so skillful with all her questions, even if she had the time. This, however, is a suggestion for more simplified planning.

It is not necessary to plan each lesson elaborately. Overemphasis on the writing of lesson plans makes a burden which is not commensurate with the purpose achieved, i. e., better teaching. It may be advisable fully to plan and teach one

or two type lessons; all others may be taught with simpler plans. A few intensive plans a term or a year should be sufficient.

The plan should grow out of a conscious need on the part of the teacher. This is secured by much observation of lessons taught, according to various plans. A study of different forms of plans should be made. Many teachers are given one form and do not know that others exist.

Teachers should try to visualize the whole situation—actually see in the mind's eye the room, the fourth-grade class, the schoolroom equipment, and provide for emergency questions and responses. Using the first person in writing a lesson plan helps here.

When a teacher has been thus prepared and is "on fire" with the subject-matter it might be well to experiment with various forms of plans, as (a) five-formal-step plan; (b) an outline with thought questions; (c) subject-matter and procedure form; (d) written versus unwritten form; (e) the project plan; (f) the teacher's own plan. These might be tested to see wherein they meet needs, or in what ways they fail.

Questions should lead not alone to fact answers but beyond. Often the question should lead to "concomitant and associate responses." This means that questions on method which lead a child to better habits of study are necessary. The skillful teacher will often ask such questions as the following: How did you get ready for this lesson? Was it a good way? Prove it. Where did you go for information? How do you know it is correct? Do some people differ? Such questions train for future acquisition of knowledge. They form habits of study usable in many lessons. The child feels himself an active agent, not a passive listener. Psychologically he is more likely to achieve satisfaction. Further, this satisfaction leads to setting up a readiness situation for the next lessons to be mastered. For these reasons the practice of separating subject-matter and method is to be carefully guarded against.

Delegate responsibility so that the pupils will have responsibility for thinking out questions both on subject-matter and on ways of working. Questions asked by the teacher must often cause questions to come from the pupils. Some good plans have been written which consisted of the teacher's questions and their expected responses. Some good plans consist of one or two questions. However, these questions must be high points and must cause thinking. A rare skill is required for this type of plan.

THE FORM OF THE PLAN. The aim of a lesson should be used as a guide for clear thinking and good teaching. After a teacher has written it down, she must not feel relieved of all responsibility for achieving her aim. It is not always best to state the aim at the beginning of a lesson. Often a teacher asks a few questions or presents a new situation which pupils are unable to meet. Often pupils discover the need themselves and state their own aim. For example, a group of second-grade children were making change for milk and cocoa at the luncheon period. In adding up some amounts, the problem of "carrying" arose. So few knew how to do this, that the majority decided the aim for the arithmetic lesson that day would be "learning to add and carry." In the old normal-school plans the aim bulked so large that the rest of the plan seemed to be a kind of mystical affair out of which, in some vague manner, would develop a miracle called "good teaching."

The plan should be in terms of children's purposes and must show what both teacher and pupils are to do. A plan should also show references to materials, helps, equipment, correlated work, and so forth.

A good plan is tied up with books and their connection with environment. This is true of the so-called constructive activities as well as of more specific book material. Children should be taught to handle printed matter thoughtfully and to discuss it economically.

The following are some suggested lesson-plan forms chosen from many sources.

FORM I

Subject-Matter | Procedure

FORM II

Main Topic or Question

1. Questions under it with
2. Probable responses,
3. References, helps, etc.

FORM III

Teacher Activity | Pupil Activity

FORM IV

I	II	III
Important Items for the teachers	Pupil Activities	Materials, helps, etc.

FORM V

- I. Aims or Purposes
- II. Subject-Matter
- III. Outcomes
 1. Expected
 2. Achieved

FORM VI

Teacher's Questions | Pupils' Possible Responses

FORM VII

PROJECT PLAN

- | | |
|--------------|----------------|
| I. Purposing | III. Executing |
| II. Planning | IV. Judging |

FORM VIII

This is taken from Ned H. Dearborn's *An Introduction to Teaching*, published by D. Appleton and Co. It is a plan used in the Oswego State Normal School, Oswego, New York.

DAILY LESSON PLAN BOOK SHEET

State Normal and Training School

Subject_____ Teacher_____

Grade_____ Date_____

(Reverse Side)

General Unit for Study

Outline of Subject-Matter and Material Related	Study Question and other assignment directions
--	--

Special Problems

Preparation Questions and Points for Discussion

 Suggestions for Improvement
 (This space for supervisor)

Reading References

Dr. Dearborn says, "Detailed written lesson plans may lose their effectiveness as the teacher becomes more proficient in classroom procedure."

The following plan has been used experimentally in State Teachers College, Fredericksburg, Virginia. Both the Oswego form and the following one are used in the training of teachers. But they may be suggestive for the trained teacher since they represent some very usable divisions for planning which can be used apart from the whole plan.

FORM IX

LESSON PLAN

Subject_____

Name_____

Date_____

-
- I. Problem under consideration
 - II. Objectives stated

- III. Approach
 - 1. Pupil basis
 - 2. New material
- IV. Development (discussion and questions)
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
- V. Summary (objectives clinched)
 - 1.
 - 2.
 - 3.
- VI. Source materials
 - 1. Teacher
 - 2. Pupils
- VII. Teacher's statement of results accomplished
- VIII. Teacher's suggestions for next lesson
- IX. Principles of education consciously used by teacher
- X. Criticisms of supervisor
- XI. General suggestions

FORM X

Colvin reports another form for reports of lessons written by student teachers. This is found in the *Eighteenth Year-book of the National Society for the Study of Education*.

a. Review b. Advance c. Assignment

Outline of lesson in detail:

a. Aim b. Method c. Questions asked d. Illustrations used e. Results

SOME EXAMPLES OF ACTUAL LESSON PLANS. With the individual method of teaching has come a radical change in lesson plans. These plans are written in the child's language and from his viewpoint. They consist of goals to be reached, a motivated list of activities, references, and checking up. These plans are so clearly made for the individual pupil that

they necessitate individual conferences rather than class discussion.

The following is from an English 7B lesson-plan assignment submitted by C. Margaret Hartman and used by her in teaching. It represents the individual assignment idea, and is designed to occupy several lesson periods.

ENGLISH 7B

A few weeks ago in the Sunday Book Review section of the New York *Times* there was a picture of a distinguished-looking, gray-haired man. If you look up that paper you will find that the picture was of Samuel Langhorne Clemens, better known as Mark Twain. He is well known to everyone, not only here in America, but also abroad. When he was alive he was so well known that the following story was vouched for as a fact:

Mark Twain was touring western Europe and Asia. A group of his friends met one evening in a New York club and wrote a letter to him. They addressed it,

MARK TWAIN
HEAVEN-KNOWS-WHERE

The letter was dropped into a mail box and the incident forgotten. Some months later the following answer was received from Mark Twain:

"It does."

It seemed as if everybody did know him and love and admire his art.

Look up the biography of this very interesting and well-known American author.

Huck Finn and Tom Sawyer are well-known figures in American literature. Mark Twain says, "You don't know me without you have read a book by the name of *The Adventures of Tom Sawyer*; but that ain't no matter."

If you haven't met Tom as he whitewashed the fence, or as he sat in church and watched the little white pup come in and sit upon a June log, or heard him tell the Sunday school superintendent that David and Goliath were the first two disciples, you have failed to meet one of the greatest boys in American literature. Then there are Huck and the Connecticut Yankee and a score of others. Mark Twain has made them all live for us.

But the ones we want to meet now and love are Edward, King of England, and Tom Canty—"The Prince and the Pauper."

Read the book *The Prince and the Pauper*, and as you read think about the following:

This book is an account of how, *by a change of clothes*, Prince Edward, later Edward VI of England, and Tom Canty, a London beggar boy, underwent also a change of station and for an instructive period each tasted the other's fare. "Clothes do not make the man." What you are is the only thing that counts, and Tom Canty in kingly robes was king, and Edward, in beggar's garb, was not a beggar, but he was, as he would always be, the princely, highly educated, highly cultured king. What you are, speaks—in spite of clothes.

Look up the following and be prepared to recite on them in conference:

King Henry VIII—character, early and later

Edward VI—character and life

Elizabeth

Lady Jane Grey

Mary Tudor

Note the relationship between these persons.

Answer *all* of the following questions. Do not put these into your notebooks.

1. What is Father Andrew's place in the story?
2. Would it be easy for such a boy as Tom to meet the Prince? How does Mark Twain get over this difficulty?
3. Would it be likely that the Prince would change clothes with Tom? How old was the Prince?
4. What made Tom's mother so doubtful?
5. Why was the Prince interested in Tom's sports?
6. Tell about the Whipping Boy.
7. Why was he so important to Tom?
8. Who is the villain in the story?
9. Might the Prince have imagined he was such a boy as Tom if he had become mad?
10. Would it be easier for Tom to adapt himself to the life of a Prince than for the Prince to fall into Tom's mode of life? Why?
11. What was the test that showed Edward to be the real king at the time of the coronation when the two boys were brought together? How does Mark Twain prepare for this from the beginning?
12. What does the hermit try to do to the Prince? Why?

13. Why should the hermit pity himself because he thought he might have been Pope instead of an archangel?
14. What effect did Hendon's use of Latin have in making the constable let Edward escape?
15. Why were people burned at the stake in those days for being Baptists?
16. What was the effect, according to the story, of the King's experiences among his people? Did it make him more merciful? Did he understand people better? Was he a better King?

REPORT FOR PERSONAL CONFERENCE:

Answer the following questions in your notebooks. Please have your answers clear, concise, and brief.

1. Contrast Tom's parents and surroundings and Edward's. Do this in outline.
2. Find a map of Tudor London. Draw the map. Indicate the location of London Bridge, Temple Bar, Westminster, and Southwark.
3. Discuss in a well-worded paragraph the following question: "Would merely the change of clothing deceive people so completely?"
4. Would people be more likely to believe that the Prince was Tom or that Tom was the Prince? Why?
5. Discuss the improbabilities of the story. Do they spoil our enjoyment of it? Must we be made to forget them? How does Mark Twain do this?
6. Name some superstitious beliefs that exist today.
7. Give the story of King Alfred and the cakes.
8. Why did the severe laws against stealing not keep people from doing it?
9. Give the story of Miles Hendon's return to his home.
10. Give the story of the coronation.

SUGGESTED WORK:

1. Draw a picture of Tom or a picture suggesting his surroundings and home.
2. Find out what you can about the dress of men particularly in the time of Prince Edward.
3. Discuss "Does severity of punishment tend to reduce crime?"
4. Find out about witchcraft—tell what you know about witchcraft in Colonial America.
5. Give a report of the conference on the Order of the Garter.
6. Give a report of the conference on beggars in King Edward's time.

SUGGESTIVE LESSON PLAN OF A LESSON ACTUALLY TAUGHT¹

SUBJECT AND GRADE	AIM AND CONTENT	PROCEDURE	ACCOMPLISHMENT CHECK
Reading Grade III	To increase the power to read independently and accurately <i>Little Folks of Many Lands</i>, by Chance "Ikwa"—page 23	Steps in Teaching I. <i>Introduction</i> To arouse interest Use of map to show the regions in which the Eskimos live II. <i>Assignment</i> Reading of the selection silently to find the answers to five questions placed upon the black-board Type: How does I k w a keep warm? III. <i>Instruction</i> Upon meanings of words listed and asked about by pupils Short drill IV. <i>Study</i> Pictures in book V. <i>Testing</i> Answers given to the assigned questions VI. <i>Oral reading</i> Parts selected by children as interesting and enjoyable	(To be written up after lesson has been given) The class as a whole were able to find and give answers to simple questions based upon fact and interpretation

¹This and the two following lesson plans were obtained from the State Normal School, New Haven, Conn.

SUGGESTIVE LESSON PLAN OF A LESSON ACTUALLY TAUGHT

SUBJECT AND GRADE	AIM AND CONTENT	PROCEDURE	ACCOMPLISH- MENT CHECK										
Spelling Grade IV	To teach the spelling of 5 new words To give drill upon 10 words previously misspelled List of new words from <i>One Hundred Spelling Demons of the English Language</i>, by Jones <i>meant, hear, many, separate, forty</i> List of review words <table><tr><td><i>cheerful</i></td><td><i>holiday</i></td></tr><tr><td><i>brighten</i></td><td><i>travel</i></td></tr><tr><td><i>knife</i></td><td><i>great</i></td></tr><tr><td><i>rough</i></td><td><i>either</i></td></tr><tr><td><i>friend</i></td><td><i>gentle</i></td></tr></table>	<i>cheerful</i>	<i>holiday</i>	<i>brighten</i>	<i>travel</i>	<i>knife</i>	<i>great</i>	<i>rough</i>	<i>either</i>	<i>friend</i>	<i>gentle</i>	Steps in Teaching I. <i>Introduction</i> To arouse interest Report of class progress II. <i>Instruction</i> Words pronounced and used in sentences Difficult features of words pointed out — <i>sep(ar)ate</i> III. <i>Drill</i> 1. A visual picture made of each word 2. Each word pronounced by class individuals 3. Words spelled — aloud, silently 4. Each word written once 5. Oral spelling — review words IV. <i>Test</i> Written dictation (new words; 5 review words)	Class seemed to master all new words except <i>meant</i> <i>forty</i>
<i>cheerful</i>	<i>holiday</i>												
<i>brighten</i>	<i>travel</i>												
<i>knife</i>	<i>great</i>												
<i>rough</i>	<i>either</i>												
<i>friend</i>	<i>gentle</i>												

SUGGESTIVE LESSON PLAN OF A LESSON ACTUALLY TAUGHT

SUBJECT AND GRADE	AIM AND CONTENT	PROCEDURE	ACCOMPLISH- MENT CHECK
Arithmetic Grade V	To introduce multiplication of fractions Types 1. $\frac{2}{3} \times 6$ A fraction by an integer when the integer is a multiple of the denominator Flash cards $\frac{2}{3} \times 9$	Steps in Teaching I. <i>Instruction</i> On the principle Forms $1\frac{1}{2}$ of 4 Used only $2\frac{1}{2} \times 4$ long enough $3\frac{1}{2} \times \frac{4}{1}$ to make the $\frac{4}{1} \times \frac{1}{2}$ principle clear	The principle involved in the lesson seemed to be clear to every pupil
	2. $6 \times \frac{3}{4}$ An integer by a fraction when the integer is a multiple of the denominator Flash cards $8 \times \frac{3}{4}$	II. <i>Drill</i> Given on Types 1 and 2 through use of flash cards Reduction omitted until principle is mastered III. <i>Test</i> 1. Paper work Recording of products 6 examples under each type on board 2. Results checked by neighbors 3. Papers returned to owners 4. Corrections made	There were some difficulties in reduction A troublesome multiplication fact $\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$

The statement has been made that the progressive experienced teacher may not need a written plan. But she perhaps does a definite bit of planning. If the teacher has taught the lesson many times, knows her pupils well, is thoroughly versed in a scientific psychology, and knows her subject thoroughly, it may be that a brief memorandum will suffice. But we are faced with the fact that when a great teacher like Dr. Frank McMurry admits the necessity of a plan, little hope remains for most of us to risk a lesson without a plan of some kind.

A SPIRIT OF COOPERATION BETWEEN TEACHER AND PUPILS AND AMONG PUPILS

Children in schools today are to be future citizens. They are to live in a world which strives toward an ideal of true democracy. In this world we find various widely differing groups of people. The names of these groups may change, but groups we shall always have. Progressives, reactionaries, rich, poor, middle class, republicans, democrats, liberals, conservatives, Catholics, Jews, Protestants, black, white, yellow, urban, rural—the procession passes by. It is not difficult to secure like-mindedness within the group. In a great emergency such as a World War, there is cooperation between the groups. Without some crisis, some common enemy, however, cooperation between the groups is achieved with difficulty. In many cases, dissension within the groups themselves arises. Until we get cooperation *between* groups, at least on essentials, and until each group cooperates within the charmed circle and also without, true democracy remains but a dream.

What does this mean for the teacher who gets this broad vision of cooperation? It means a schoolroom where all the cooperation is not just between the teacher and the pupils. Neither is it solely within the one classroom, fostering unfriendly rivalry with another room. Neither must the cooperation within the school group be so welded that the

wrong spirit is engendered against other schools. Perhaps the word "cooperation" is a misnomer in these instances. But cooperation, like other human endeavors, has its levels. We may find a classroom in so demoralized a state that there exists no cooperation. The first level might well be to achieve cooperation between the teacher and the class working as a unit. This having been well started, the responsibility for achieving worthy living in this schoolroom should be shifted to pupil groups with the teacher as a guide and helper.

Her guidance will be needed many times because life outside begins to picture itself in this school situation. Groups or committees may learn to work well within their circle, but quarrels arise over differences with other groups. This cooperation applies not only to questions of management but to problems of subject-matter. In a well-conducted kindergarten today you often see a list of pupils' names on the board under such headings as:

Chairmen of Committees

Cloakroom	John	Library table . . .	George
Hall duty	Mary	Pencils	Ann
Plants	Richard		

These children work through committees and conduct class meetings to discuss important questions. Such work goes on up through the grades, growing easier each year if the right habits have been formed. Committees are appointed for the geography lesson. The chairman meets the group, discusses finding of materials, and prepares for a group report to the whole class. A class is divided into reading groups. Each group is responsible for the preparation of a portion of a long lesson, or for various lessons. The teacher may be a chairman of the whole but interfere only when time is being wasted or when errors need correcting.

These are glimpses of the work of many schools in this country where the need of participation in actual citizenship problems is being met. Thus may the ideal of true democracy in America become an achieved fact.

WISE SELECTION OF SUBJECT-MATTER

What is wise, psychologically speaking? For many generations adults have arbitrarily chosen the subject-matter which they believed children should have. It was chosen from the adult point of view. It was a question of what the adult wanted the child to have, not necessarily of the child's interests and needs. The old idea of the child as a sinner needing to be made good by fear of punishment was shown in the readers of colonial days. Here is a quotation from the *New England Primer* of that period:

Young Sam'l dear
The Lord did fear.

Whales in the sea
God's voice obey.

While youth do cheer
Death may be near.

Zaccheus he
Did climb a tree
Our Lord to see.

Young pious Ruth
Left all for Truth.

Peter deny'd
His Lord and cry'd.

Young Obadiah,
David, Josiah,
All were pious.

Wisdom in psychology today teaches us that original nature and children's native interests do not run along these lines. More modern times have also erred. Many readers had such inane doggerel as:

Well! Well!
The boy is at the well.
Is the boy well?
The boy is not well.
The boy is well.

But the present-day readers are perhaps the best achievement in wise selection of subject-matter. They contain delightful stories with children and animals in action, good pictures, and childlike fanciful humor.

A MAXIMUM OF WORTH-WHILE ACTIVITY WITH THE TEACHER AS A GUIDE

Activity on the part of the teacher is as old as the teaching profession. Activity on the part of the pupil is new enough to be unacceptable to many people. Traditionally, it is associated with disobedience or revolt against authority of all kinds. If the activity is not worth while, one must agree that passivity would be better. But life itself is activity, life is adjustment, life is learning. Psychologically, we find that learning takes place only when the learner does something. This does not necessarily imply moving the body about. Activity, of the mind may look like passivity. But this mental activity to be learning must ultimately affect the doing of the learner.

If activity within the divisions of vocation, citizenship, family life, leisure time is to lead to the development of those traits which mean the good life, then the teacher's function is to lead this activity into worth-while channels.

If we accept this meaning of worth-while activity we are somewhat dismayed to find our older type of classrooms built on passivity. Long rows of screwed down seats with aisles between are to assist in preventing activity. Materials in locked cabinets on high shelves are there for the teacher to select, but they prevent choice (activity) on the part of the pupils. The ancient high platform with the teacher's desk and her chair like unto a throne have passed. But surely they were symbols of passivity, of obedience to authority. They rarely contributed to initiative, independence, or activity on the part of the ruler's subjects, the children. So a change of equipment has come about in many situations. This change will be effective only if a change has first occurred in the teacher's thinking. Mere

equipment has little to do with activity. Witness the teacher with the tables and chairs kept rigidly in the same rows as before. Materials may be placed on long tables but the teaching is such that the children do not voluntarily use these materials. But with the true understanding of activity, the movable furniture, the less rigid organization, and the freer use of materials come to be aids in the worth-while quality of the activity.

So basic seems this idea of activity on the part of the learner, that where the subjects of reading, writing, arithmetic, and spelling were once called the tool subjects, we now group them under the term "activities." It has been said that "the true function of the teacher is to stimulate self-activity on the part of the children and then guide this activity through a series of carefully graded educative experiences. . . . It is what *pupils* do, and not what the *teacher* does, that educates them. It is not what teachers give but what children get that counts."

To be really worth while this activity set up by a good teacher must be so full of interest, purpose, meaning for the pupil, that he follows his desire for further investigation and activity in the subject. The test of artistic teaching is not what the child does when the teacher is present, but what he does with the subject-matter when her presence is removed. Does the child go eagerly to the library to get a book of poems like the one from which the teacher has read? Does the boy use a supplementary arithmetic in order to find more long division examples? What about the high-school student who closed the English book and said, "No more English for me after this test. How I hate English!" Was it all her fault? Did the teaching leave her with no inspiration to investigate it further? Should it? May not the years after school indict many a teacher who boasts that she gets all her pupils through with good marks?

A teacher must take account of the emotional responses of her pupils. These responses condition the attitudes toward the subject and are often the ultimate test of the worth-

whileness of the activity. To like or not to like the learning is a potent immediate factor and an equally powerful remote consideration.

A DESIRABLE BALANCE BETWEEN INDIVIDUAL AND GROUP ACTIVITIES

This fifth characteristic of good teaching needs most of all to stress a desirable balance. The older type of teaching emphasized the activity of the individual and that individual was too often the teacher. About 1893 in the United States there was a definite movement for the study of the child. Dr. G. Stanley Hall deserves much credit for the impetus. The dominating interest in education shifted from the schoolmaster, the textbook, the equipment, the subject-matter, to the child. It was a much needed shifting of attention. Dr. Arnold Gesell of Yale said, "The child is the last serf of civilization." A department called the Child Study Section was added to many state teachers' associations. Parent-teacher groups were formed in the schools. Wealthy foundations gave money for further study. The movement is still growing.

The first effect in the schoolrooms was that more attention was paid to the physical welfare of the child. Medical inspection and school nurses aided here. The next result was that the child was individualized, and soon came tests and measurements to assist in the mental field (see p. 85).

Recitations were under fire and an attempt was made to allow for the expression of children's opinions even when they seemed opposed to the teacher's. It is impossible to consider the individual without the group. Only a Robinson Crusoe could be individualized. Soon we were having the so-called socialized recitations. Some of these resulted in such inane observations from one pupil to another as "I liked the way you stood, John." "You said 'a' for 'the,' Mary." "You held your book with the wrong hand, George." But the socialized recitation was a transition step and when

properly managed became a fine movement toward the desirable balance between individual and group activity. Under the direction of Dr. Milo B. Hillegas, Teachers College, Columbia University, the Bureau of Publications of that institution has published a pamphlet called *Stenographic Reports of Lessons*. These were actual recitations in the Horace Mann School, New York City, and show a fine balance between the two types of activity.

Some instructors stress group activity too much. It sometimes becomes the hope of the dull student and the despair of the bright one. At least the instructor must assume the responsibility for homogeneous groups or else much dissatisfaction results on the part of the more rapid workers. While this group work in a classroom is often splendid for discussion, for clarifying ideas, the individual must be allowed time for his own thinking and summarizing. Groups may well be formed in a fifth-grade geography class with chairman to lead and to arrange for reports. A check can be kept on the work of each person. But when reports are presented to the whole class, each individual in the class must feel some responsibility for discussion and for rejecting or accepting the reports. The term "class meeting" seems a good one for such work. "Recitation" seems too individualized and "socialized recitation" has been often far from truly socialized.

In the balancing of the individual and the group, the modern school has sometimes lost sight of the individual known as the teacher. There is no objection to this teacher's seating herself in the back of the room, or with the group. But much time is wasted, not commensurate with educational values, when the teacher permits irrelevancies, bickerings, or errors that should be arbitrarily ruled out by the only one who happens to sense their presence—the teacher. Mentally and physically she needs a quick stepping to the front of the room.

The lecture method in the elementary schools has come into disrepute. It partially deserves this, perhaps. But the

pendulum usually swings too far. The qualified teacher knows more facts about the subject-matter than her pupils. There are times in a recitation when it is her duty to inform the elementary-school child of the facts. If it is a case for research or finding out, that is another matter. These facts are often the clues necessary to open traffic and to allow activity to proceed.

Thus do we preserve a balance between individual and group activities, neglecting no individual in the group enterprise. For your schoolroom, like life itself, is a group enterprise.

A CONSIDERATION OF THE INDIVIDUAL NEEDS, INTERESTS, AND ABILITIES OF CHILDREN

As the number of pupils in a given classroom increases, it becomes increasingly difficult to take account of the individual. Democracy has been accused of the leveling process. The dull pupil is often nagged, humiliated, and discouraged, but the very bright pupil may be ruined for group life by being made a "show-off," an obnoxious egotist, and, withal, a prig. From the standpoint of common sense alone it seems absurd to class varying abilities in one group in September and expect them to come out alike in June. Outside of the schoolroom, children and grown-ups adjust themselves and their interests into more equal groupings. Nothing is more conducive to unhappiness in life than the individual of inferior ability in a situation where he cannot keep up the pace. Life drops him out or down. It is quite as sad to find the superior minds or superior social or motor "intelligences" yoked to a less capable group.

Before the testing movement was launched in the United States, many teachers divided their classes into A and B groups for such subjects as reading, spelling, arithmetic, geography. The brighter pupils recited in the A group. The basis of the division was the teacher's opinion or a combined opinion of room teacher, grade supervisor, and the principal of the school. The groupings were fairly constant and an A

pupil recited in the A group for every subject. This grouping was certainly an improvement on no grouping at all. But with the more scientific attitude toward education, various questions arose. How true was the teacher's opinion? Were the groups small enough? Did the mass instruction allow the bright child an enriched course, spur the average child on, overstimulate or discourage the slow mind?

Dr. Thorndike, Dr. Daniel Starch, Dr. William McCall, and other pioneers attempted to get at the truth of some of these vital matters. Many teachers were asked to grade the same examination papers. Teachers were asked to regrade papers which they had previously corrected, after a lapse of some time. The variation in marks and the wide range of grades given were astonishing. So it has come about that progressive schools today are supplementing the teacher's judgment by using standard intelligence tests. These tests will show the teacher a fact which she already knows, but is glad to have substantiated. This is the fact that the chronological age and the mental age may be very different. The six-year old child may be but four years old, mentally. Or, he may be eight years old, mentally. This knowledge in the former case might have saved many a primary teacher from being discouraged because of so many failures in the first grade. By the same token in the case of the superior first-grade group, many primary teachers may have been greatly overestimated. (See *Classification of Pupils*, p. 85.)

PROVISION FOR CHECKING ACCOMPLISHMENT AND MEASURING PROGRESS

This factor needs also to be classed as a characteristic of good teaching. Good teaching, or bad, does not end with the recitation period. The manner and amount of accomplishment checking often conditions the teaching. It is human nature to want to know the goal, how far we are from it, and how well we have done in striving for it. More than that, though it may be a low level, many humans strive not for the

thing itself but for the "Well done, thou good and faithful servant," at the end.

Experiments have proven that teachers' judgments are as unreliable in measuring a child's progress as in guessing that he is bright, average, or dull. So, in addition to the intelligence tests, we now have a fine array of achievement tests. These are for the purpose of finding out the child's progress in reading, both oral and silent, in handwriting, in arithmetic, in spelling, in languages and composition, in geography, in history, and in citizenship. Manuals accompanying these tests give definite directions for giving and scoring the tests and for grouping the pupils accordingly.

It seems reasonable to group pupils into at least three divisions. Some schools have the slow-moving, the average or normal-rate, and the rapid-advance groups. The rapid-advance group need not be "skipped" or greatly accelerated. They are given an enriched curriculum. This works out very well in reading classes. A library table in a schoolroom on which are placed interesting books, magazines, or pictures, forms a nucleus for the enriched reading course. Reports of outside reading given to the whole class, written reports as an individual check-up on outside work, visits to the city library, current event topics are some of the ways that the rapid-advance pupils enrich their lives by reading. At times, these pupils become leaders and helpers of those in the average or slow groups. They conduct word or phonic drills, assist in the study of a new lesson and in other ways avoid becoming too individualized.

The average group needs to be kept interested and to be spurred on to more and better work. This group, like the group below, must have the individual difficulties of each member diagnosed and the proper remedies applied. If the difficulty is inability to get new words or to remember old ones, the child may need more drill on words, on phonetic elements, or may need easier reading material. If the reading is too slow, he may need to read with a time limit. Flash cards may help here if drilled on in close connection with

material to be read. Often a reading period may be arranged so that the rapid group takes care of itself at the library table or assists members of the average group. The average group prepares a new lesson for the first half of the period. The teacher works with the lowest group. The scene shifts and pupils change groups as their abilities improve. It is a far and encouraging cry from the days of calling on each pupil by the word "next" or "go on." It is a day of attending to individual needs. The same three or more group plan is used in handwriting. The upper group is formed of pupils whose writing scores higher than is needed for their particular grade. These pupils are excused from the writing class so long as their writing in all subjects is up to or above standard.

PROVISION FOR PUPILS TO THINK FOR THEMSELVES

The eighth characteristic of good teaching is the provision for pupils to think for themselves when they have sufficient data, at the same time urging them to preserve an open-minded attitude until they have secured adequate data. It has been said that it is not so important what we think as that we shall think. If a classroom is dominated physically and mentally by the teacher, the children's business is to conform to her. They may do it through fear or through love. In the average school of today the physical conformity is not so dangerous as the mental. Many schoolrooms have adjustable seats, good lighting, proper ventilation, books, paper, pencils, and the like. Children stay in the seats, look at their books, breathe good or bad air, write on paper with pencils or pens. We grant that harm may come here from lack of recreation, change of air, bad lighting, or too passive use of materials. But experts in physical education and administration have noted these dangers and are ready with preventive measures. The dangers and the prevention are very tangible. Though physical, and hence material, they lead to emotional and intellectual changes in the pupils.

It is a much harder situation that we face in sensing and

guiding, without dominating, the thinking of pupils. Both psychology and philosophy teach that skill and habits must be practiced in the situation in which they are later to function. If the real situation is not feasible, then we may provide one as nearly like it as possible. For example, in teaching banking to pupils in the upper grades, it is not always possible to take children into a real bank except for an observation trip. Neither can they write real checks, figure interest on real notes, or handle real investment securities. But many progressive schools today set up a miniature bank, use canceled or sample checks, and even conduct a real savings bank for inculcating thrift habits.

What has this to do with provision for thinking and initiative? How can a habit of open-mindedness be formed in a school situation? How can suspended judgment become a habit? During suspended judgment, how may pupils be trained gladly and earnestly to search for all sources of information on both sides of a question? A policy of hands off has prevailed here. In some vague way we have done the thinking for pupils and expected them to emerge after eight to twelve years in this situation able to form their judgments intelligently in controversial questions. Habit does not work this way. If we want intelligent choices to rule and guide American citizens, we must give children who are our future citizens a chance for making choices in their school years. During school life we try to form habits of reading good books, of speaking good English, of doing long division, of spelling correctly, and of being courteous. We know that we cannot wait until a child leaves school and expect these habits to come by magic. In the realm of open-mindedness we do not see so clearly. We fear. Fear of pupils not having facts, fear of parents' prejudices, fear of not covering all the facts in the prescribed curriculum, the teacher's fear of contradiction—these and other fears have made us forget the psychology which we practice in other school situations.

How may we train children to think and choose intelligently? What is it to be intelligent in our beliefs? Surely

we must know the pertinent facts on both sides of any question. We must inform ourselves of the claims made by both sides. We must weigh these facts in the light of the evidence. We must withhold judgment, dogmatic statements, angry retorts. When at last we reach our decision, we have made our choice an intelligent one. It is quite possible that we will ultimately act according to our race, sex, near ancestry, our traditions, but we have chosen on a higher level than unreasoning blind authority. We have used our minds. This is a delicate matter, yet it can be handled in school. It is well to bring in several historical authorities rather than use but one text. The teacher may keep silent or else be sure to tell pupils that people differ about these points. If a nation is suffering from a coal strike, could facts on both sides be presented in the eighth grade current events class? If a city is engaged in a controversy as to municipal ownership, cannot pupils have all the facts?

Such a procedure in our classrooms today would lead children to a much wider use of encyclopedias, the *World Almanac*, dictionaries, card catalogs of libraries, and the appendices of books. It would lead to a consideration of the date of the book's printing, the reliability of the author's facts, the use of source materials, of newspapers, of current magazines, of various textbooks. It would prevent snap judgments, a narrow provincial outlook on life, a lack of charity for those who differ from us. If such tolerance on the part of growing children becomes a habit it will function in adult life by the same law of habit and growth. There are no sudden changes. Thus we may come nearer to that democracy which recognizes that we will always have various widely differing groups of citizens.

CARE TO ESTABLISH PROPER ATTITUDES AND IDEALS

Great strides have been made in definitely ascertaining the amount of skill and the number of habits acquired by

pupils. We are reasonably sure of a child's speed in reading even to the point of knowing how many words per minute a child of any given grade should read. We know how many letters he should be able to write per minute and how legibly his work should appear. We can measure his skill in oral and written composition. We know how well he should reason in arithmetic and about the number of arithmetic facts needed in each grade. But what we do not know is how to measure his attitudes toward the work, the teacher, himself, his associates, and what ideals may emerge as a result of these attitudes.

How can we build up the proper interests? Can we measure them? Probably we will be able to, but at present education must proceed, for children are growing up. Unless used, the skills and habits are lost or changed for others, but attitudes remain. They are the residue. They may cause scars or they may be leads to further worth-while learning. Skills and habits are so conditioned by attitudes and ideals that, outside of school at least, they determine the child's trends toward better or lesser things. It is not uncommon to hear from children such expressions as, "I hate poetry," "I can't see any use in grammar," "I am dropping history the second semester. It is too dry." We have hope enough to believe that these expressions may be supplanted by "I love poetry. I got this book of poems at the library after our teacher read us those poems." "I like grammar, because I see how it helped me during better speech week." "You have to use good grammar to get that job in the bank on Saturdays." "I am taking history the second semester. Our teacher has traveled and she makes it so interesting."

A bright, energetic girl looked forward to the day when she might study French. She had taken Latin and German in her high-school course. She enrolled in a French class taught by a man who began the lesson by telling pupils that they must work hard because he failed about one-third of the class. Having thus made them fearful, he began a rapid fire of French sentences. The sentences were short and easy but he

spoke too rapidly for the class. He put nothing on the board except the name of the text to be used and a long assignment. This procedure was scarcely varied for one semester, except by difficult examinations of the grammar of the text. Nothing of the beauty of the French language, nothing about the people, the art, the literature of France were given. It has taken some years to heal the scar for this student. Only one desire was implanted at the time. It was to pass the final examination and never to study French again. This is not an unusual experience.

Children, like adults, enjoy doing that which they can do well. Skills and habits seen as a means to doing the thing well are necessary. Satisfaction in removing obstructions, in achieving, in re-establishing our equilibrium or our complacency attaches a joyous emotional response to the activity. A child enjoys acquiring skill in and of itself. But he will build up a better permanent and abiding interest if the skill is the result of his own purposing and if it leads on to possibilities of further activity. Skills and habits are necessary. But they, alone, will never send the child out into the world with a self-determination to live a life that is an ever-increasing movement toward higher levels of rich achievement.

As a characteristic of good teaching this point of view looms large. Some searching analysis may help a teacher here. We may think of the building of these attitudes in terms of the three factors involved: The teacher's personality, the subject-matter, and the method used.

Personality, so far, has eluded the scientific workers. Attempts have been made to define it outside of mere opinion about it. The fact remains that what it is, why personalities affect various people differently, how much we can cultivate its complex traits are matters of guess. Adults tell us that they learned to love English, mathematics, even Sanskrit, because some teacher who had the vital spark inspired them. Others have lost interest in subject-matter because of some flaw in the personality of the instructor. Some teachers have so dominating a personality that students fail to realize that

the interest is not in the subject-matter but in this personality. It is a high ideal to fire pupils with a love of the subject itself, but so closely are subject and teacher united that this ideal too often remains a theory.

The true teaching personality of fine quality never forgets to lift others as she lifts herself. She never loses sight of the attitudes she wishes to create in her pupils. The power of the teacher here is linked with the pupil's satisfaction in his success. Repeated failure, due to work that is too difficult, to lessons impossibly long and poorly explained, to poor planning, to nagging, to sarcasm, are daily building antagonistic attitudes which outweigh all the facts coercively acquired. It is a doubtful lottery to hope for good out of the so-called discipline of performing tasks which we dislike and for which we have no aptitude.

Subject-matter and teaching-personality, as well as method, are knit together. To separate them means to ignore the completeness of the life situation. For example, we have different types of teachers according to their subject-matter. These types are likely to develop different attitudes in pupils. We can all recognize the textbook teacher. She is too often indifferent toward the progress of pupils but keen about their verbatim reproduction of the textbook content. She is likely to lose sight of attitudes toward the work but she is sure that her pupils "cover the ground." That is often about all they really accomplish. Effort ends with the examination day.

Another type is the teacher who feels herself the center of pupil interest. This type of teacher is much loved by pupils and parents. She has a pleasing personality, a great amount of energy and enthusiasm, and has many smiles and approving glances. Her name might well be Pollyanna. She uses many external devices, games, and rewards. Unless the attitudes that she is building are known, her procedure will deceive the very elect. Interest in her personality, rather than direct interest in the pupil's own activity, is the attitude which this teacher fosters. Let a substitute with a less scintillating

aura of brilliancy arrive, and the interest in the work lags.

Then there is the formalist type of teacher. She prides herself on subject-matter outlines very logically arranged and taught. She is efficient in all routine. Pupils are taught in written work to leave margins, head papers, and make a perfect, unblotted paper, with each letter on it formed according to an established system. Pupils often stand and pass to cloakrooms by count. They march like soldiers and the teacher's commands are at all times unquestioningly obeyed. No opinions in history, reading, to say nothing of art, are ever advanced in the class if they are contrary to the teacher's. There is no disagreement physically or mentally in her schoolroom. Plants, chalk, books, chairs, shelves, pencils obey her arrangement. She is not cruel and her despotism is often benevolent. Only a few of the coerced really dislike her. The meek ones often worship her whom they ignorantly fear. The attitude here is that of the dark ages of obedience to unquestioning authority. The result is never a rich and worthy life for an individual. It is a life hampered by the wishes and domination of another instead of adjusted to opinions and rights of all.

Finally there is the teacher who feels the pupil to be the most important factor. This teacher is a guide, an inspiration, and a help, but not a dominating influence. Pupils are allowed to collect data and express opinions on controversial matters. They build up an attitude of tolerance, a power in choosing, an ability to initiate, and a desire for more knowledge and skill which continues long after this teacher has passed from the stage. And it is this power of creating the desire for growth that constitutes a teacher's greater rewards.

Emma B. Grant Meader.

CLASSROOM APPLICATIONS OF PSYCHOLOGY



By

ARTHUR I. GATES, Ph.D.

Professor of Education
Teachers College, Columbia University

CLASSROOM APPLICATIONS OF PSYCHOLOGY

IN THIS department are presented several principles of modern dynamic psychology which have an important bearing upon the teacher's work in the classroom. Most of these facts are concerned with methods of teaching and learning. An effort will be made to illustrate them concretely.

LEARNING WITH AND WITHOUT GUIDANCE

The first question is whether the pupil learns better when left to his own devices or when he is guided in his efforts by the teacher. This problem, once quite dead, has come to life again in the form of a defense, now frequently offered, for learning "naturally." It is said that children differ so greatly that only by letting the young learner follow his own impulses can we be sure that he will begin the subject at the right time and in the right way. Children are, therefore, encouraged to begin their reading, writing, and other subjects at the time when they feel the craving or "need" and in the manner that comes naturally to them.

Considerable confusion has arisen in discussions of this problem, inasmuch as it includes several questions that have not always been distinguished. Let us take up first the question whether the methods of learning which children adopt are usually effective.

A study conducted by Dr. Lois Meek¹ was designed to throw some light on this problem. Dr. Meek took as subjects a group of kindergarten children who had not learned to read any words. She presented the child with five boxes. On the cover of each was pasted one of the following words: *ball, bolt, bell, fall, roll*. She told the pupil that a real ball was in the box on the cover of which was pasted the word *ball*, and that if he would pick out this box three times in succession he could have the ball. Without exception the children took up the game with enthusiasm. Although the task was difficult most of them succeeded—in different numbers of trials, of course—and developed greater interest as they mastered new words in similar tests. But a considerable number simply could not do it. Their interest flagged rapidly; indeed, some developed a marked distaste for the game.

The problem then became: What was the reason for these failures? Was it lack of intelligence? No, not in general, since many of the failures were among the brightest pupils. Was it lack of desire to do the task? No, apparently not, since at the beginning these children were no less interested than those who succeeded. Was it some type of general or specific educational immaturity? Apparently not, since the one thing that enabled the children successfully to master the game was tuition and guidance given by the investigator. Apparently the whole trouble was in the method of attack. For some pupils the natural method was quite inadequate. It brought only failure, and with failure came a chagrin that not only killed interest but also frequently resulted in a thorough distaste for the subject. Skilled guidance into effective methods of learning succeeded, where persistent “natural” efforts, encouragement, offers of greater reward, and other devices failed.

The results of Dr. Meek’s study are really very significant. They show what is probably the common result of natural methods of learning: While many pupils will progress very

¹Lois Meek, *A Study of Learning and Retention in Young Children*, Teachers College, Columbia University, Contributions to Education, No. 164.

well, a number will get into more or less serious trouble. Some, indeed, will get into very serious difficulties. Without doubt many of the serious defects and striking "disabilities" in reading, spelling, writing, and other subjects begin in such initial difficulties. In many complex skills, defects and deficiencies of slight or great moment are for all learners the almost inevitable result of wrong natural methods. Pecking the typewriter clumsily with a few fingers under the observance of the eye is a typical instance.

It may be taken for granted, then, that skilled tuition is necessary in typical school learning. There is a real function for a teacher. Not all types of teaching are equally useful, however, and some may be positively harmful. Some suggestions concerning good and bad teaching techniques are therefore in order.

DETERMINING READINESS FOR THE TASK

The first step is to ascertain whether the pupil is "ready" to master the function to be taught; whether he possesses the prerequisites of mental, motor, and other abilities. Nothing is more potent to establish wrong habits and distastes for a task than the chagrin of failure which results from attempting work beyond one's powers.

Readiness is not the same as spontaneous interest in learning or an expressed desire to learn. All sorts of circumstances may lead a pupil to feel an eagerness to start to read, to learn Latin or physics. The fact that a pupil has, by some experience, developed such a desire is no certain evidence that he has the aptitude sufficiently matured to succeed in learning. Contrariwise, a pupil may well be sufficiently advanced to achieve marked success without feeling an interest in the function. Matured ability, in other words, does not necessarily result in the spontaneous flowering of interest.

These facts were well illustrated in a study of learning to write made by Dr. O. E. Hertzberg.¹ To several hundred

¹O. E. Hertzberg, *A Comparative Study of Different Methods Used in Teaching Beginners to Write*. Teachers College Contributions to Education, No. 214.

New York children, most of them from four to six years of age, he gave tests of intelligence, speed and accuracy of motor control, and visual perception of figures—abilities involved, presumably, in learning to write. Then he measured carefully the children's progress in learning to write under carefully controlled conditions. The ability to learn demonstrated by controlled practice during several weeks ranged from great to nearly zero. There was little evidence that those who progressed rapidly were any more interested in writing before the learning was begun than those who failed dismally. In other words, it would not have been possible to have predicted degrees of ability to learn by appraising interests and desires before the teaching was started. Dr. Hertzberg found, however, that the results of some of his tests of motor and mental capacities given before the children were introduced to writing gave a very good indication of ability to learn. Of those getting below a certain score on the capacity tests, nearly all failed to learn to write legibly during the course of the experiment, and of those getting above a certain score, nearly all learned to write legibly. Readiness to learn satisfactorily, then, is indicated not so well by one's feelings and interests as by one's mental and motor capacities.

Tests of readiness for reading, writing, algebra, Latin, and other subjects are being rapidly devised. When they are not available, some substitute should be sought. In such cases teachers should realize that the child's untried interests, being largely fortuitous, are unsafe guides. They should also realize that teachers' judgments based on appraisals of the pupils' general maturity are often quite incorrect. In the study of writing it was found, for example, that the teachers' judgments concerning the pupils' capacities to learn to write were very often erroneous. Factors such as age, bodily size, and social demeanor were apparently given undue importance. In the absence of reliable tests of readiness, the best procedure is to conduct an actual trial. Dr. Hertzberg's experience provides a suggestion here: The trial to be diagnostic

must not be too short. The first week was not a fair test of either interest or capacity in many cases. Some pupils who proved to be of excellent ability and who developed high interest during the third week were floundering and subject to discouragement during the first few days.

IS INTEREST A CAUSE OR A RESULT AND SYMPTOM OF ABILITY?

An important result from both studies just referred to concerns the influence of interest on ability and of ability on interest. An old pedagogical theory held that a person could do almost anything in which he was sufficiently interested. In the two investigations just mentioned it was found, however, that pupils soon lost their interest in the thing they could not do well. The old theory was right only to the extent that interest and ability tend to go together. But by implication the old theory had put the cart before the horse. Interest seems to be the result rather than the cause of achievement. A more accurate statement is that interest is a symptom. It is a symptom of several things of which successful performance is primary. To other factors we shall refer later. In general, the pupils in both the studies of reading and writing, whether they had interest to begin with or not, developed enthusiasm if they were successful learners and lost it or acquired a distaste for the subject if they failed. Nothing is more stimulating, more dynamically potent than success; therefore "nothing succeeds like success."

We may now appreciate interest in a new light and value it for a new purpose. We should recognize interest not as a cause of success in a type of study, but as a symptom of good achievement—a sign that things, on the whole, are going well. Interest, then, is to be conceived not as a spontaneous flowering from within, not as an entity for whose appearance we should passively wait, not as a power that will sweep aside all obstacles to achievement, not as an end to be sought for its own sake, but merely as a symptom—like pink cheeks

—of other conditions. Interest, as such a sign, is secured, therefore, by doing many things that contribute to successful and useful achievement. The remainder of this article, since it is devoted to some of the means, is really concerned with developing interest as well as ability in school work.

LEARNING EXPLAINED AS REACTING

Of all the principles established by the investigations of educational psychology, the most important for the teacher to grasp and utilize is that *learning consists in the acquisition of reactions*. Learning is never a passive process of absorption. We learn through activity and *what we learn are the reactions we make*. This is the general principle. Let us illustrate and clarify it.

If a child tries in his first writing lesson to produce the form of the word *cat*, he begins with products that vary widely from the model. The products, for a time, are of different types, and none are legible. The child learns by producing movements—motor reactions—which he struggles to control in such a way as to produce a written result similar to the model. Guided by the model, the motor reactions gradually approximate the ideal. The child is learning by making reactions, and what he learns are reactions. Reaching a satisfactory stage of performance, the pupil exercises the muscular reactions until they become stable, fixed, habituated. Each child eventually habituates a certain type of reaction, one producing one style, another a different style of letter. Each acquires the specific reactions that were practiced.

There is nothing mysterious about the statement that in acquiring motor activities one learns the reactions that are practiced. The mysteries are entertained when the acquisition of facts—names, dates, arithmetic combinations, ideas—is described. But the truth is that in learning facts, the same principle holds—one acquires the reactions that are practiced. To illustrate: Several persons look at the same picture and each describes what he observed (learned) about

it. No one reports everything, and all reports differ. The picture was a situation to which all reacted mentally, but different persons reacted to different things and in different ways. At best one can recall or reproduce only the mental reactions made to the picture. These mental reactions are made and then reactivated—though there are usually omissions and distortions—just as in learning to write, movements are made and reinstated at a later time. And just as the direction of motor response can be controlled by an aim suggested by the model product, so may the trend of repeated mental reactions to the picture be guided by some objective. The control, for example, may be the directions “Now get the color scheme” or “Note what the children are doing” or “Note how the women are dressed.” What one learns is determined by the way one reacts, because what one learns are the reactions made.

Let us take another illustration, from reading. The writer recently prepared a series of reading tests, each consisting of a number of easy paragraphs of about fifty words. In one test the child is instructed to carry out certain directions which are simple but very exact. Unless he reads every sentence with great care and with full comprehension, the pupil is certain to carry out the directions erroneously. In a second test, the pupil must appraise the main idea in the paragraph in order to pick the best of four offered titles for the passage. A third test requires the pupil to read so as to retain accurately a number of significant details. A fourth requires him to read in such a way as to be able to number accurately a series of statements so as to provide an outline of the thought or the exact order of the events depicted. A fifth type requires only that the reader appreciate the general mood of the person or situation described and check the right word in such a series as *happy*, *angry*, *sad*, *excited*, *afraid*. A sixth asks the child to read in order to anticipate which of several possible things is “most likely to happen next.”

Experimental studies have shown that some children are good in some types of reading while they are mediocre or

poor in others. Some, for example, do well in reading "to get the mood," but poorly in exact reading of directions. Some get a firm grip on the details, but have little skill in grasping the main idea. Reading, obviously, does not everywhere require one and the same ability. Reading is reacting and there are many types of reading reactions.

It is found, moreover, that the only certain way of developing any type of reading reaction is to give it specific practice. Training for one kind of reading may contribute but little to other types. The teacher's task, then, is to see that pupils are given training in just the kind of reaction that is desired.

Mere reading, mere study of vocabulary, mere study of history, mere observation in art, mere experience in carpentry will likewise not guarantee the development of desired mental and motor reactions. Since this is certainly the case, the teacher has the twofold task of ascertaining just what reactions are desirable and how they may be established with economy of time and effort.

CRITERIA FOR SELECTING DESIRABLE REACTIONS

What type of reaction is desirable? The guiding principle may be epitomized in the following slogan: "*Establish the reaction in the way it is to function in life.*" Practice the ABC's forward if that ability is of practical value. If another reaction called for in life is to place a letter roughly in its position in the alphabet, then practice in just that response must be given. Practice in spelling should be mainly in writing rather than in oral response, since in real life we rarely need to spell a word except as we need to write it. In writing, life demands a very rapid hand (as in taking notes), the quality of which need be no more than intelligible to the writer himself, as well as a more legible style for others to read. Most of us have acquired at least these two varieties of writing skill, although few were assisted by the school in learning them. Learning a multiplication table in a fixed order as it

appears on page 76 of the text leaves us with a limited ability, like saying the alphabet forward. Life rarely demands that we recite such a table. What it does require is prompt and accurate reacting to the facts in many forms, such as $4 \times 2 = ?$; four two's are what? How much are two apples at 4 cents each? How many plates are needed to set the table for four couples? etc. Consequently, practice in such reactions should be abundant.

Most of the concrete suggestions concerning effective methods of teaching and learning are really corollaries of this main principle. To give some of the subordinate suggestions may be serviceable not only for their specific utility but also as a means of further clarifying the major principle.

THE USE OF MECHANICAL AIDS

In learning to write, the young child may conceivably be assisted by a variety of mechanical aids. Among the many devised are letter or word forms carved in metal or board, in which the learner traces with a stylus; sandpaper or colored outlines of letters to be followed with the finger; letter forms to be traced on thin paper through which they are visible. Taking the child's hand and pushing him through the movements constitutes another type of mechanical aid.

Many favorable things have been said by the advocates of such procedures. They are said to give essential sense training, develop the muscular "feel" of the successful movement, produce useful kinesthetic and visual images, prevent the formation of many erroneous reactions by giving exercise only in the right ones, and so on.

In a careful study¹ these very devices have been tried out upon beginners in writing in comparison with the method of attempting to write with no guidance other than a visible copy of the word to be produced. The latter method produced far better results than did the use of any single type

¹O. E. Hertzberg, *A Comparative Study of Different Methods Used in Teaching Beginners to Write*. Teachers College Contributions to Education, No. 214.

or combination of the mechanical devices. Indeed, from our general principle, this result should have been anticipated. We learn those reactions that we practice. Now, reacting in a groove is one reaction, and those so trained learned to trace in grooves excellently. But writing without such an aid is another matter. That the reactions are very different would have been apparent to anyone who observed the pathetic consternation of the pupils at their inability really to write in their first attempts after many days of practice on the same words in the grooves or with other devices.

These results should not be taken to mean that all mechanical aids in learning are utterly useless. The main purpose served by any such aids is to enable the learner to perceive what reaction is desired. In writing, what was desired was apparently well enough indicated by the mere sight of a model. The grooves, sandpaper outlines, and other devices added nothing to clarify the task, while they introduced controls that interfered with the acquisition of full-fledged writing. In some functions, mechanical aids may be of great practical value by indicating the nature of reactions desired without introducing at the same time irrelevant and misleading habits.

Dr. E. H. Reeder¹ has arranged a series of objectively scorable questions and exercises to be used as guides in the study of assignments in geography which will serve as an admirable example. Sample exercises follow.

STUDY QUESTIONS

Sections 406 to 413, pages 210 to 214 in the text, tell about the Green Northlands of Europe. Paragraph 406 tells what the principal industries of this region are. Write them here.

_____ and _____

Why are these the industries of the Green Northlands? Read from section 406 through section 413 with that question in mind. Read these sections twice. Then see how many of the following questions you can answer. After you have answered all you can,

¹E. H. Reeder, *A Method of Directing Children's Study of Geography*. Teachers College, Columbia University, Contributions to Education, No. 193.

find the answers to the others in the book.

1. Write below the names of the islands which lie between Scotland, Norway, and Iceland.
_____ and _____
2. Underline the best reason why the land in this section is used chiefly for pasturage.
 - a. There are many cattle and sheep there.
 - b. The islands are covered with snow in winter.
 - c. The islands are too wet to plough in summer time.
3. Fill in the blank spaces.

Partly because of the fact that this region is not suited for agriculture, the chief industry of the people is _____. (look at the picture on page 210). _____ and _____ are salted and dried for export. The people's houses are made of _____ and have _____ roofs.

4. Underline the best title for section 407.
 - a. Summer tourists in northern waters.
 - b. Why northern waters near Europe are warmer than those near North America.
 - c. The Gulf Stream.
 - d. Ocean currents of the Atlantic Ocean.
5. Cross out the wrong words.

Ocean currents make the lands we are studying $\left\{ \begin{array}{l} \text{warmer} \\ \text{colder} \end{array} \right.$ than they would otherwise be. The Gulf Stream flows from the Caribbean Sea and the Gulf of Mexico $\left\{ \begin{array}{l} \text{northeast} \\ \text{northwest} \end{array} \right.$ across the $\left\{ \begin{array}{l} \text{Atlantic} \\ \text{Pacific} \end{array} \right.$ Ocean. The current has $\left\{ \begin{array}{l} \text{twice} \\ \text{ten times} \\ \text{1800 times} \end{array} \right.$ as much water as the Mississippi River.

6. Put a "T" before the sentence below if it is true and an "F" if it is false.
_____ The ports on the eastern coast of Siberia are open longer than those on the western coast of Norway.
7. Fill in the blank spaces below with the words "water" or "earth." Be sure to put the right word in the right place.
_____ heats more slowly than _____.
_____ cools more slowly than _____.
_____ is warmed to a greater depth than _____.

Exercises such as these may be considered as mechanical aids, but they differ in important respects from the devices

used in writing. The geography exercises indicate the kinds of reactions that we desire the pupil to make during his study. To do the exercises correctly the pupil must detect the important facts, observe the relation of one fact to others, and the relation of various items to certain general problems. The pupil must read selectively and sagaciously; he must think and reason with the facts in the passage. Now, these are exactly the reactions that life demands of competent readers. The exercises do not do the work of thinking for the pupil as the grooves control the movements in writing. They do not give the pupil exercise in reactions that are quite different from the natural function. Thus we see that our general principle serves as a guide in determining whether a suggested type of mechanical aid is a good one or poor one.

Exercises like those tried out by Dr. Reeder proved in investigations conducted in regular classrooms to be highly efficacious. The pupils liked to study with them and they not only learned more facts but they also acquired better techniques of manipulating, thinking, and reasoning with the data. The exercises, like the copy in writing, served as a kind of model of good ways of working. By completing the exercises, moreover, the pupils could readily determine what facts they acquired and what ones they overlooked or distorted. They could discover not only how well they had mastered the material in general but also in what particulars their knowledge was deficient, hazy, or erroneous. They were able also to test their powers of applying the facts. They could secure objective measures of mastery and progress. These devices made their work not only more efficient, but also more enjoyable. But, like any other good thing, such devices may be overdone. Children may be led to become so dependent upon exercises that they are less efficient when the devices are removed. The wise teacher will require study of material for which the pupil must either make up his own problems or else will guide his study without any such aids. Properly employed, practice with such exercises helps to establish independent skills in study and thinking habits.

THE USE OF SUPPLEMENTARY DEVICES

In American education there exists a marked tendency to use supplementary devices. In reading, for example, the common method is to give "abundant experience in reading to get the meaning, with subordinate attention to mechanics." In practice this means a long period devoted to regular reading, and frequent or occasional periods to "supplementary" training with flash-cards, phonic and phonetic drills, word games, and other devices. The difficulty with these practices lies in the fact that the subordinate drill is supplementary and not intrinsic. If the drills are conducted by themselves, we may be assured that what is chiefly learned is how to do the stunts practiced. Thus very frequently in phonetic work the child learns to dissect words into phonograms and to chant, combine, and juggle these elements in various ways. But the reading lesson is another lesson and reading is another function. The phonetic skills may not transfer usefully to ordinary reading. By practice in recognition of flash-cards very briefly exposed, the pupils learn better to react to the card situation. But how will such skills influence ordinary reading? Experiments¹ performed indicate what our trusty principle of learning-by-reacting implies—the skills usually do not carry over in very great degree to ordinary reading.

We should therefore treat with skepticism and study with care all supplementary devices offered as a means of improving the function to which they are subordinate. The typical "memory," "will," "reason," and other systems of training consist largely of more or less useless supplementary devices. Formal gymnastics as a means of improving skill for football or track, exercises in tracing ovals, loops, and other figures as a means of improving writing, persistent drill on scales and simple combinations in music as a means of learning to sing or play are familiar samples of exercises that are usually very

¹Arthur I. Gates, *Functions of Flash-Card Exercises in Reading*. Teachers College Record, Vol. XXVII, pp. 311-27.

wasteful and sometimes entirely futile. Teachers in all fields have, in the past, possessed a veritable passion for supplementary stunts. Many such exercises are not only wasteful but often the most disheartening phases of learning. Pupils rarely crave to trace in grooves, run scales on the piano, etc.

THE USE OF INTRINSIC DEVICES

Where supplementary devices are found to be inadequate, educational psychology suggests as a remedy not a return to natural trial-and-error learning but rather the construction of what may be called "intrinsic devices." For example, instead of using flash-card drills to increase the speed of perception of words, the number of items read at a glance, and the length of the "eye-comprehension span" in reading, chief reliance should be placed on actual reading situations in which periods are timed and pupils are encouraged to exceed their records of rate and comprehension. Instead of using phonetics, the writer has attempted to develop familiarity with common word units, divisions, combinations, and structure, and the knack of working out by such means the perception of new words by the use of a series of exercises which are integral phases of good reading experience. For example, in the child's early development of a reading vocabulary he will solve such problems as these:



hat
flat

cat
sat



sing
ring

thing
king

The pupil marks the word that describes the picture. Other exercises take the form of such questions as these:

What does the bird do when it is happy?

It rings.
It sings.
It clings.

In other exercises the child reads a paragraph or puzzle

and answers the problems on the basis of the context. For example such statements as

The children made a *house* of cardboard
The children made a *horse* of cardboard
The children made a *mouse* of cardboard

may follow a story which gives the facts. Or a puzzle may be offered in the following form:

I am made of iron.
I can make a sweet sound.
I live in every school.
I call the children to church.
What am I?
A ball
A bell
A cell

These exercises are not set apart from normal activities in reading. They are made an intrinsic part of the work. They sharpen perceptual attack, set up effective habits of "seeing" words during reading, throw into relief similarities and differences among words, and indicate the divisions of words into parts. Coupled with practice in writing and spelling words by similar divisions they give the mechanical skills needed more economically and enjoyably, more surely and effectively, than traditional supplementary training in phonetics and the like.

Skill and ingenuity are required to construct intrinsic aids in learning. Not much work has yet been done along this line in many subjects and many inadequate schemes will undoubtedly appear. Nevertheless, this is the direction that much future study in the learning process is certain to take.

THE USE OF RULES, DEFINITIONS, AND OTHER VERBAL FORMULATIONS

A type of aid frequently used in the past for the purpose of curtailing the pupils' trial-and-error efforts in learning consisted of abundant rules, definitions, and other precise verbal

formulations. In the elementary school, rules in spelling and both rules and definitions in grammar and arithmetic were common; in higher grades, some subjects like geometry and algebra consisted largely of a series of logically related rules and definitions. There has, however, been a pronounced reaction against these devices and a growing tendency to teach most of these subjects inductively. Many of the most widely used texts in spelling, for example, give no rules at all. Words, moreover, in these books are not classified according to similarities or contrasts in sound, configuration, or meaning; each word is mastered as a separate and specific item. In grammar and other subjects, facts and usages are likewise to be learned by "habituation," by specific experience rather than as a unit in some larger whole covered by a rule or summary definition.

When we inquire why this pronounced disrespect for rules and similar verbal formulations came about, we are told that they have proved a failure. They fail, it is said, because rules are often too concise, too difficult for the young learner to grasp; because they allow of too many exceptions; because they often become intelligible only after the child has otherwise learned the facts they were meant to illuminate; because they encourage children to memorize words rather than understand facts; because children forget the rules they learn and even if they remember them they rarely know when to use them. There is much truth in all these accusations, yet it may be questioned whether the trouble was really intrinsic in the use of rules and in children who use them, or in the particular methods of usages that have been employed.

The use of rules, definitions, slogans, and the like should be treated in the chapters of educational psychology devoted to "the acquisition of general ideas" and the "processes of generalization and abstraction." The rule or definition is a concise statement which covers many particulars, alike in some respects; it "generalizes" or brings to a head a broad body of experiences. It deals with the essentials abstracted from diverse things or events. The difficulties with the use of

rules and definitions have been due mainly to a failure to appreciate how the young learner abstracts common factors from his experiences and how he generalizes. It was assumed that the pupil should first get the rule in definite and succinct form and then apply it to particular cases. As a matter of fact, the rule in order to be intelligible should not be given first but should be developed gradually in the midst of carefully selected and controlled experience. The essential matter is that the idea should emerge from specially relevant experience and, if the verbal formula is to help, it should be given in terms of that experience. The rule or definition and the experience should interpenetrate. The final formulation should seek to be a reminder or summary of the experience rather than a logical dictionary-perfect definition. What is meant can best be clarified by an example.

During some years of experimentation, Dr. Alice Watson¹ has studied a method of controlling experience and utilizing verbal formulations to the great assistance of students in spelling. A sample procedure, briefly stated, is as follows:

PROCEDURE WITH "EI" AND "IE" DIFFICULTIES

1. The pupils write on the board words they have collected in which the long *e* sound is spelled either *ei* or *ie*. It is apparent that there are many of them.
2. The children write in their notebooks a page of words spelled with *ei* and another page spelled with *ie*. This provides two classes of words. The words in each category are alike in one or possibly more respects and unlike the words in the other group in one or possibly more respects.
3. The pupils compare words in each category with one another to find other similarities and words from one group with those of the other to discover differences. In time two discoveries emerge:
 - a. The *ie* words have nothing in common except the *ie*.
 - b. The *ei* words all have the *cei* sequence. Every pupil verifies these facts.

¹These studies are described in full in Dr. Alice Watson's dissertation, "Experimental Studies in the Psychology and Pedagogy of Spelling," published by the Bureau of Publications, Teachers College, Columbia University, New York.

4. A series of *ie* words is dictated and afterward a series of *cei* words to clarify further the two types.
5. A mixed list is then dictated to further discrimination of the two types. Mistakes are given special attention.
6. The rule is introduced:

When sounding long *e*,
 i before *e*
 except after *c*

Children verify the rule by referring to their categories.

7. For some time thereafter children are given miscellaneous *ie* and *cei* words when their attention is engaged on other matters. If they make mistakes, they are referred to their categories and the rule.
8. Exceptions and misapplication of the principle are handled when they arise. When handled one at a time, they may be more easily labelled as exceptions.

In such a procedure, the main gain comes from generalizing one's experience. The pupils are led to relate new problems to earlier problems solved by the same key. Forever to treat each new spelling problem as distinct from all others is to forego the advantages of transfer from experiences which possess significant common elements. The use of the rule—the verbal formula—alone is of slight value. Its value depends chiefly on its association with the work designed to disclose concretely the similarities and differences between categories of experience. The rule is not primary but distinctly a secondary contribution.

Newly conceived and properly fused with concrete experience, rules, definitions, explanations, maxims, and the like will return to service as a means of assisting the learner in nearly all school functions.

Now, can these facts be included under the dictum: "Practice the reactions that the world demands"? The answer is *yes* since one thing the world will demand is insight into experience, ability to abstract its significant factors, and to reason. Fundamental to these activities is skill in perceiving similarities and differences in concrete experiences and in formulating these facts. Indeed, such a type of teaching as

was just described in spelling is an excellent means of guiding children in learning to make these very difficult mental reactions. They can learn to make such reactions only by being led to make them.

INTEREST IN RELATION TO THE CONDITIONS OF LEARNING

From a consideration of principles of reaction in learning, we shall turn in the final section to a discussion of some of the conditions of learning. We shall consider the relation of various conditions both to efficiency and interest in learning.

For many years there has been a constant complaint by educators and laymen alike that much of the learning in school is both dull and futile. Pupils, it is alleged, are taught much that has no function outside the schoolroom, and fail to acquire much practical skill and information that out-of-school life could utilize. It is said, furthermore, that children enjoy life out of school more than in the classroom. Since the problems of interest and proficiency overlap at many points we may consider them together.

In preceding sections it was said that children rarely profit from work that is beyond their capacity at the time and that failure usually results in distaste. It may be added that pupils, like adults, may find equally unproductive and annoying work below their ability. A function can be too easy as well as too hard. One source of interest as well as of advancement is a proper adjustment between the worker and his work. Recent studies of the relations between the capacities and work of the pupils in typical grades reveal the fact that we have often erred seriously in this respect. One level of work is assigned to vastly differing capacities. On the playground the relations are usually better; the pupil finds a game and group that are neither hopelessly above nor hopelessly below his capacity. Better adjustment of the pupil to his pursuit is sorely needed in school.

May we expect that if a child is assigned work of proper

difficulty he will *ipso facto* become interested and productive? Is interest exclusively a symptom of proper adjustment of worker and his work? Is success in performance the sole criterion of satisfaction? Despite the fact that children often revel in successful achievement in innumerable trivial activities, we shall find in the long run that they prefer to acquire skills and knowledge that are widely applicable. They prefer ability to read to ability to recite phonetic jingles because reading has far wider utility and yields more frequent approval from others. They prefer learning arithmetic which enables them to make change, tell time, read street numbers, measure boxes and the like, to mere jugglery with abstract number facts. In Dr. Hertzberg's study, it was found that children preferred to learn to write real words, despite perplexities in the learning, to the more obviously successful and rapid progress in tracing in grooves which had no utility beyond itself. The numerous new studies of what facts and skills children actually put to use will make possible great improvements and increased enthusiasm in education.

Stocking the school program with materials more widely useful will have other good effects, too. Things learned in school unless elsewhere used will soon be forgotten and even children are sensitive to the chagrin of failure to recall. More important is the fact that all concomitants of learning—the zeals, skills in learning, judging, reasoning, habits of controlling the temper, of diligence, trustworthiness, thoroughness, and other desirable traits—transfer less surely and thoroughly when developed in connection with abilities exercised only in school. All such desirable traits transfer to the extent that the outside situation has something in common—"identical elements"—with the school situation. The more the specific arithmetic taught is used the more the concomitants of the arithmetic lesson will transfer.

Given proper adjustment of pupil and lesson and widely useful functions, efficiency and interest may be retarded or increased by other factors. Some of these will be viewed.

The study or practice period may be too long or too short.

Fatigue especially is potent to neutralize other factors conducive to interest and achievement. How long the practice periods should be will vary with the existing state of "warm up" or fatigue, the nature of the function, the age and vitality of the pupils. The relevant facts are now being revealed so that proficiency and eagerness for study may be better secured and preserved.

The distribution of practice required to master difficult tasks may be improper. It is found experimentally that learning a long lesson or a difficult act by concentrating on it continuously is very wasteful. A series of distributed practice periods will often yield a mastery in one-half the time. Slow progress, when apparent, not only dulls interest but may bring loss of zeal and a further decrease in improvement.

Encouragement and assistance may be provided when sorely needed. Periods of stagnation and inability to progress are encountered even under the best of conditions by the most successful learners and performers. The most skilled baseball pitchers, golfers, composers of verse or music have all experienced them. Even to the seasoned learner these "plateaus" and periods of "off form" are exceedingly depressing although these people know they will pass off in time. The young learner is not exempt from such discouraging periods. On the contrary, he probably suffers from them not only more often but also more seriously because he understands them less well. It is not improbable that these experiences occasionally give rise to permanent distaste for some activities in young pupils. It is, therefore, highly desirable that the teacher detect such crises and that she deal with the pupil with consummate tact and skill.

The effects of learning may be concealed through inadequate determination and display of achievement. One of the merits of the exercises provided by Dr. Reeder was that attainments were objectively measured quite apart from subjective bias and errors. Children declared they especially liked this feature. In stages of depression in many functions, children may actually be progressing when they think they

are not. General depression is sometimes attributed erroneously to loss of skill in some activity. A demonstration of progress is sometimes good for the pupil in general as well as for the achievement in the function in particular.

Progress may be blocked or hampered by some especially inappropriate habits that have crept in. Rarely can a child detect such erroneous devices. They are the frequent causes of "plateaus." The skillful teacher should be an expert diagnostician. With the help of numerous diagnostic studies in reading, spelling, and most other subjects this is becoming possible. "Practicing errors" undetected has caused many educational fatalities. There is good evidence that many serious cases of backwardness and "disability" in school subjects have resulted from continued undetected practice of unfortunate reactions such as are prone to appear in all forms of trial-and-error learning.

Most of the factors and conditions which further efficiency in learning also cultivate interest. Interest, therefore, is not a mysterious power which itself has supreme dynamic potency. It is not an entity to be captured by subtlety and attached to a task to enliven it. Rather it is a symptom of all-round well-being in the relation of the worker to his task. Interest can rarely be produced—at least not long maintained—by any single pedagogical device or trick. On the contrary, it flowers as the result of doing well many things—some of which have been suggested in the foregoing pages—that contribute to efficient and wholesome working conditions. Like happiness, interest is readily upset by many single things, some of which would not alone produce it. The competent teacher appreciates such a loss of zeal as a symptom of some disturbance and, like the competent physician, such a teacher will not treat the symptom but remedy the cause. (See also *Principles of Good Teaching*, p. 243.)

Arthur I. Gates

LESSON ASSIGNMENTS



By

EDWIN H. REEDER, Ph.D.

Assistant Professor of Education
Teachers College, Columbia University

In Cooperation with

FRANK M. McMURRY, Ph.D.

Professor of Education
Teachers College, Columbia University

LESSON ASSIGNMENTS

THE conception of the teacher as simply a taskmaster or a hearer of lessons is giving way in modern schools to that of the teacher as a leader in study. This conception is developed in detail in another department (see Teaching Children to Study, Vol. VI, p. 35). With the growing respect for little children—their purposes, problems, likes, dislikes, and original capacities—has developed a correlative interest in teaching them how to learn, so that their study may become progressively more fruitful to their mental life and more satisfying to their emotional life.

It is but natural, then, that such a movement should pay more serious attention than has been given in the past to lesson assignments, for they represent the out-of-class supervision and leadership of the teacher. Perhaps in an ideal situation a teacher should be present in the flesh to guide and direct children in their preparation for the classroom. It seems obvious, however, that teachers are present in the spirit, for their lesson assignments are productive of either good or bad study on the part of the children during their study periods.

When the writer was in the eighth grade the teacher used to assign the history lesson in somewhat these terms: "For tomorrow study pages 94 to 97. Study them carefully; I want you to know *every word* of the lesson." The ominous emphasis on the italicized words gave us very definite direc-

tion in our study. We knew that we were to be held responsible for minute knowledge of every fact in those pages; we also would have known, had the idea ever occurred to us, that a weighing of the relative value or importance of the facts was neither expected nor considered particularly desirable. If we were conscientious, our study of the lesson was exactly the sort of undertaking which we would have pursued had the teacher been sitting at our elbows. Through her assignment she was supervising our work.

THE FORMER CONCEPT OF LESSON ASSIGNMENTS

In the past, lesson assignments have consisted chiefly in laying out a certain amount of subject-matter to be learned. "Learned" in this case meant memorized and the recitation was simply a process of finding out whether the children had been conscientious in their memorizing. No suggestions as to how to learn were given; the assignment was in terms of quantity alone which placed the emphasis on the *what*, not the *how*, of learning.

The trouble with such assignments is that they are deadly dull and uninteresting and entirely without motive except the negative one of escaping trouble in the next recitation period. We are nowadays setting more and more value on the importance for efficient learning of having children satisfied and happy in their work (see departments on Teaching Children to Study, Vol. VI, p. 35, and on the Project Method, p. 203 of this volume). For years "doing one's homework" has meant the most stupid drudgery, and study therefore has come to have a very unpleasant connotation in the minds of our school children. The chief source of blame has been unintelligent lesson assignments.

The serious thing about a hostile attitude toward study is that it may color a person's whole life, so that instead of seeking intelligently for facts on which to base his conclusions either in his home, his business, or his civic life, he will be ready to jump at the ready-made conclusions in the

clever advertisement or in the newspaper. To do otherwise would mean study, and he has had enough study in school.

This whole situation is utterly unnecessary, for if lesson assignments are of the right sort they will be looked upon as a challenge which the child is glad and ready to meet, and study becomes an engrossing occupation instead of a round of dreary boredom.

WHAT IS A GOOD LESSON ASSIGNMENT?

It naturally follows from what has been said above that the first requisite of a good lesson assignment is that it shall be interesting. However sound it may be from the logical point of view of the subject-matter itself, an assignment which lacks in interest is wanting in motive for the children's effort and is therefore of little use in securing sustained work on their part.

Second, it must have definite elements so that children will have some ideas of what to do. Immense amounts of time have been lost by school children through the fact that teachers who think they are very modern will give such assignments as: "You had better look up this matter of iron and steel in the Middle Atlantic States and see what the facts are." What the facts are! No one person knows them all or can know them all; their implications are present in nearly every feature of the geography, geology, economics, history, politics, and industry of this whole section of the United States. Such an assignment means either that the child does nothing because the problem is so broad or else that he flounders helplessly in a sea of facts and ideas.

There are two other evil results from such indefinite assignments beside the waste of time. One is the fact that parents try to help their children out of their predicament, and not being trained teachers, they frequently do more harm than good. The other bad result lies in the fact that indefiniteness makes for careless collecting of facts and ideas which might be in some way related to the topic. Such carelessness

later on seriously hampers good thinking because children have not learned how to make a clear, precise analysis of problems and facts to solve them. They are helpless in that most important ability of weighing the relative values of data in the light of a clearly stated, definite problem.

The third characteristic of a good lesson assignment may seem at first to be in contradiction to the second. The statement has been frequently made by educational theorists that "a definite lesson assignment is a crime against children." We have been attacking this theory to some extent, but there is a measure of truth in it. We have nowhere said that *all* of a lesson assignment should be definite. We have simply stated that it should have definite elements. But the third characteristic of a good assignment is that it shall have indefinite elements also. Children need to be shown how to begin their work through some sort of definite directions; they also need help in getting their problem or problems for homework clearly defined. But children vary greatly in ability. What would be a long task for some would be a short task for others. If there are no indefinite elements in the assignment, and its length is supposed to be calculated for the average pupil, then some of the children will be overworked while others will develop lazy habits because they are not given enough to do.

If all children, moreover, are given only definite, specific tasks, there is no opportunity or incentive for the development of initiative and originality. If, then, line A—C below represents a total assignment, line A—B may be the definite

A _____ B _ _ _ _ _ C

part and line B—C the indefinite. Line A—B will usually be the same for all pupils; line B—C may vary indefinitely. Such an assignment would be the following: "We have begun today our study of China. Read the textbook description of China and pick out the one or two things in it which you think are most interesting. Be able to tell us tomorrow why you think they are interesting. If you have time, look up

these things in greater detail in some of the reference books over on the table. They may give you more reasons for thinking the topics you have selected are worth while."

The above assignment also exemplifies the fourth characteristic of a good lesson assignment. It must have the unity which comes from some central problem. Such unity was absent in the type of assignment which simply required children to know all about the facts in a certain number of pages of text. The child who does the task outlined in the previous paragraph reads with a definite problem in mind; there is unity to his effort and it is not scattered over an indefinite number of facts and ideas.

Finally a lesson assignment ought to require the organization of ideas. This characteristic grows out of the one above and is dependent on it. The human mind is so constituted that it remembers facts better if they are connected because of their relationship to each other. We all have frequently had the experience of seeing a face we know but of being unable to call the person's name because we cannot remember where we have known him. If the latter fact is finally remembered, we can often remember the name. The two facts are associated with each other in our minds and remembering one recalls the other.

Unorganized, disconnected facts are exceedingly hard to remember. An assignment which requires learning them is one of the most difficult a teacher can give. On the other hand, if they are organized around some central problem or problems, if they are linked together in the mind in chains of cause and effect, or of a sequence of some sort, learning is made far easier.

Not only does the organization of ideas in lesson study facilitate remembering, but it also makes thinking easier and more probable. If, as is nowadays being urged, the recitation period is to be a group thinking period, then an assignment which demands the organization of ideas is the prime requisite for such a period. Organizing ideas makes the mind orderly like a well-managed store where automobile parts

are sold. Each nut, bolt, plate, or rivet is in its proper box or drawer. The assignment which does not require organization makes the mind what Dewey calls "a heap of miscellaneous junk."

THE IDEAL ASSIGNMENT

In the past thirty years, more and more emphasis has been placed in our school work on teaching children how to study. Toward this end, the sort of assignment given on page 326 makes an important contribution. As children acquire this ability more and more, one can approximate the ideal assignment, which consists simply in saying to the children, "You know what you need to do for the next lesson. Go ahead and do it." Such an assignment, however, takes for granted years of careful training in how to study, and means that a goal has been reached which is seldom attained in all subjects in the elementary school. Teachers will do well, however, to keep this goal in mind in their everyday work and try the ideal assignment from time to time to see how well their efforts to teach children how to study are succeeding.

WHEN SHOULD THE ASSIGNMENT BE MADE?

Much discussion has centered around this question in the past. Some teachers make it at the beginning of the lesson, some at the end; and the writer has listened to spirited arguments on both sides. The answer to the question, however, is really simple if the purpose of the recitation is kept in mind.

If this purpose is to hear lessons, the time for the assignment is quite immaterial because each recitation is an entity in itself, largely unrelated to previous or following ones. The assignment under such a system simply sets the next material to be learned in order that it may be recited at the following class period.

If, however, the recitation consists of group thinking and study, then at certain points in the period the children will be

likely to become conscious of a need for more information on some of the questions under discussion. Out of her larger fund of knowledge, moreover, the teacher ought definitely to plan for such occasions when the children will find their thinking blocked by inadequate information. It is out of such situations that good lesson assignments grow.

For example, a class was studying the situation in the United States just before the Civil War. The contrast between the resources of the two hostile sections of the nation was thoroughly discussed and the far greater strength of the North was brought out. The question then naturally arose, "If the North was so much more powerful, why was the war so long and so bitterly contested?" No answer was forthcoming in the material already covered. Therefore the teacher said, "In the next few pages you will find some answers to this question. Read the material thoughtfully and be ready to discuss in the next lesson just how each answer made it difficult for the North to win quickly. If you have extra time, find out the points of difference between the draft law of 1863 and that of 1917. See what effects these differences had in the two situations."

This consciousness of the lack of information may come at any time during the recitation period. Perhaps it comes more frequently at the end of the period than at any other time in a good teacher's work, because there is a sequence of thought from lesson to lesson and at the end of the period children are likely to be more conscious of the next step which is needed in their work. But the general principle is sound, namely, that the assignment should represent the response to children's mental needs in carrying on their thinking, and must come whenever they are fully aware of those needs.

WHERE SHOULD THE ASSIGNMENT BE STUDIED?

Of late there has been an increasing dissatisfaction with much of the school child's home study. In a departmentalized school where a number of teachers are giving the same

pupils assignments in different subjects, too great a total amount of work is likely to be laid out for an individual child, because no teacher knows what the others are requiring. Even when the same teacher is giving all the homework, she is likely to fail to realize how much she is giving. Of course the result of too heavy assignments is that the conscientious children are overworked and the others acquire habits of slovenly and slipshod methods in trying to learn at least a little about each lesson.

Conditions in the homes of many public school children, moreover, are not suitable for study. Study must frequently be done in crowded living rooms where others are talking and where good reference books may be lacking. When they try to help the children, parents who are untrained in teaching will frequently do more harm than good.

As a consequence of these facts, there has been much enthusiasm in recent years for supervised study in our schools. Teachers have felt that if the children could prepare their assignments under the guidance of trained leaders in study, much time and wasted effort would be saved, and in addition the children, surrounded by necessary aids in study, would learn better methods of work. Although heralded as the solution of our most difficult problems, the supervised-study movement has failed to a considerable degree to bring the expected results. One reason for this is that teachers have tended to give the same unintelligent and perfunctory lesson assignments that they have in the past, so that the task of supervising study has tended to become the disciplinary one of driving children to work. Real progress in supervised study is absolutely dependent on good lesson assignments.

Another reason for disappointment with the results of supervised study has been the overemphasis on the purely mechanical phases of plans for working it out. With our characteristic American eagerness, we have organized our classes to allow fifteen minutes for this, twenty for that, and twenty-five minutes for something else, and we think that in establishing this schedule we have solved the problem of

studying the assignment. Of course we have not. To quote from a pamphlet on this subject:

In educational literature, the technique of administration—disposition of the time within the period, disposition of the recitation, and the like—is much discussed while matters regarding the actual help in study, which is the reform demanded, receive only incidental treatment. The side show has swallowed up the main show! Our plea, then, is for a change in emphasis in thinking and practice. We need to be less anxious about the type of technique which the administrator chooses for his school and more concerned with the quality of pupil direction which the teacher gives in the period of study.¹

With all its blunders, however, the supervised-study movement has a strong element of value in its insistence on study as a process which can best be done in school. But the method of solution lies in a direction which we have already mentioned, namely, a re-interpretation of the meaning of the recitation period. If the recitation is to be a time for group study and group thinking, then the solution of the supervised-study problem seems obvious. Thinking, as has been stated, can go just so far and then it is blocked by lack of information. When this time comes, when all of the already known facts have been marshaled and organized, when the problem for the assignment has been fully and clearly stated, then that is the time for supervised study to be carried on right in the classroom. It should be continued not five minutes, not twenty, not thirty, nor any definite period, but until the children are ready again to think aloud together as a group.

Under such a plan as this, then, two or three of the five periods of the week may be devoted to study. Teachers should accustom themselves to thinking in terms of the task to be accomplished, not in terms of thirty-minute recitation periods. The study periods and group-thinking periods, moreover, may not coincide with the beginning and end of the class hours. The work for the week may be represented

¹William Arthur Brownell, "A Study of Supervised Study," *Bulletin No. 26*, University of Illinois, College of Education.

by the line shown in the diagram below, the double line showing the time devoted to supervised study.

-----/-----/-----/-----/-----
 1st day 2d day 3d day 4th day 5th day

The objection may be raised that because of individual differences some children may finish the assignment much more quickly than others. This is true, of course, but the advantage of studying in the presence of a trained teacher—a leader in study—now becomes apparent. We have said that assignments may well have certain indefinite elements. If they are studied with a teacher present, she can be of great assistance in working on these indefinite elements, suggesting pictures, reference books, diagrams, blackboard work, and so on, with which the bright child can make a contribution to the next thinking period.

The conception which we have been urging, then, is that the recitation and the study of assignments should represent not separate, distinct things, but should consist of one continuous process. Such a plan makes for efficient learning of good methods of study and is far nearer to the way adults study than is the artificial separation of the learning process into so many minutes of recitation and so many of the study of the assignment. The goal to be attained is independent self-direction in mental work which will carry over into adult life. Study of the assignment should be thought of as no more a preparation for the recitation than the recitation is preparation for the study of the assignment.

Edwin H. Reeder

Frank M. McKim

HEALTH AND PHYSICAL EDUCATION



By

THOMAS D. WOOD, A.M., M.D.
Professor of Health Education
Teachers College, Columbia University

HEALTH AND PHYSICAL EDUCATION



CHAPTER ONE

HEALTH AND THE TEACHER'S OPPORTUNITY

HAVE you ever tried to make a list of all the things that you would like to have, to do, and to be? It would be a long list but with the majority of us it would include the wish to have friends, to appear attractive, to earn enough to make ourselves and others happy, to enjoy our work, to make it a success, to have a home, and to be able to face hard situations cheerfully and bravely.

WHAT HEALTH MEANS

What is it within us that determines whether we can and will achieve these ambitions? Certainly a large part of the answer will be included in the possession of a body fit for the demands made on it, a mind trained to activity and efficiency, and emotions which are buoyant, strong, and helpful. Combine all these ideals of body, mind, and emotions which enable us to give and get the most out of the real values of living and we have the true meaning of *Health*.

Health makes life worth living; it makes the joy of childhood, the beauty of youth, and the happiness of later years. The bright eyed, pink skinned, dimpled baby boy who recognizes his mother when she comes to his crib and responds with smiles and beating of hands and feet is a joy to himself, to his mother, and to all who see him. The little girl who is radiant with fun and laughter and activity as she plays follow-the-leader with her mates, yet leaves promptly and cheerfully to hunt for her little brother when her mother asks her to help, is finding life worth living. The boy in Scout uniform who has come with his group to the camping place and still has energy to race the other fellows in picking up firewood and to plan an evening stunt is experiencing the joy of living.

POSITIVE HEALTH. When children are asked to define health they frequently say that it means "not being sick." Educators have not got entirely away from this negative idea of health and have assumed that if the child has been able to be at school every day his health has been all right. To define health as absence of disease is as topsy-turvy a definition as to define a wealthy man as one who is out of debt. Health is a plus quantity; it is the money in the bank; the securities for future use. It is a reserve fund available for everyday work and pleasure, and sufficient in an emergency to prevent the owner from becoming bankrupt—down and out. Abundance of health, with the joy, beauty, and enthusiasm of childhood and youth is a wonderful preparation for manhood and womanhood, for a life full of happiness and usefulness.

HEALTH OF MIND AND BODY. Many people think that health is a matter of the body and education a matter of the mind. If this were true, then a teacher who by force of authority drilled into the children the facts in an outline of study could be or would be a "good teacher." This idea is utterly false and fortunately it is rapidly passing away. The whole child is the concern of the good teacher and the good school system. It is impossible to divide a child into mind

and body, and any attempt to do so will certainly be unfortunate for the child. The mind cannot be trained apart from the body and the body cannot be trained without the mind and the emotions entering into the process. The mind depends upon the organs and mechanism of the body—eyes, ears, hands, etc.—for learning, and the learning is retained by the nervous system and is made use of by the nerves and muscles.

The condition of the body, due favorably to healthful living and abounding physical vigor, and unfavorably to such things as lack of sleep, poor eyesight, or poor food, has a tremendous determining effect on the child's mind and disposition. On the other hand the child's mind and disposition can cause great changes in his body. Fear, bad news, or terrifying danger may cause fainting or almost paralyze the body.

A young farmer, whose chief recreation was hunting, had a weakening attack of the grippe. He was convalescing but still suffering from depression, poor appetite, and weakness; yet he decided that as he could not work he would take a walk into the woods with his gun. Game was scarce; he did not expect to get anything but it was at least something to do. To his surprise he saw some game and in a short time he shot several partridges. In his part of the country any hunter would have been proud of this result from a whole day of hunting. The man utterly forgot his grippe in his enthusiasm, and, what was more, when he thought of his recent illness later, the anxiety about it had all gone. His enthusiasm, his pleasure, his forgetting of himself in what he was doing, his pride in success were emotions that stimulated to their best work all those controls of the body which govern the secretion of digestive juices, the working of the tissues involved in digestion, circulation, and other vital processes, and so his recovery was much hastened. In other words, his improved mental condition had really restored his physical health.

We do not see such extreme cases daily in our schoolrooms, yet a child may become tired and lose weight and strength

because of worry and fear of failure or punishment; or for other causes of nervous strain. Interest and zest, which make the child forget himself in the pleasure of his work and play, steadily build up health of body and mind.

THE FREQUENCY OF HEALTH HANDICAPS

Most of us are living very much below the normal fullness of health, and for reasons that are largely preventable. Here are some dry statistics which lose their dryness when we stop to consider a moment. About one-third of the men examined for the army in 1917 and 1918 were found to be unfit for active military service and the causes were largely preventable, if they had received attention early enough. Examinations of school children in many parts of the country show that three-fourths or more of them have defects which are actually or possibly detrimental to their health and efficiency. Most of these could be completely or at least partially corrected through proper attention.

HEALTH OF PERSONALITY

Physical health is obviously important. There is hardly a human being who would not do everything within his power to help a child who was suffering. All of us enjoy seeing a child full of vitality and all of us have a thrill of pleasure when we start out in the morning "full of pep" and feel fit to conquer mountains. Yet for normal human beings the greatest suffering does not come from aching teeth or other pains in their bodies, but from fears, worries, and disappointments, monotony and resentments; because of lack of attention or affection; because of anger, envy, jealousy, and depressions; because they cannot achieve the things they most want.

Our greatest pleasures come not from good dinners but from enjoying our friends; from the pleasure of sharing with others, whether it be in the fun of a party or serving on a

committee to make a drive for Red Cross membership; from the pleasure of the things we consider enjoyable—reading, music, or a picnic by the lake; from the things that we find interesting.

To avoid these keener pains and to achieve these more satisfying pleasures we need health of personality no less than health of body. Psychology and child study are showing us more and more clearly that most unhappiness is not just an accident of misfortune but is the result of failing to understand and observe the laws of the mental, emotional, and social sides of our natures, and can be prevented in a large measure, just as much physical pain can be prevented and comfort can be attained by understanding and observing laws of physical health. The difference is that the laws of personality are more complex and as yet are not so well understood. We can, for instance, tell with much more accuracy the cause of an underweight condition, and the food and amount of rest needed to help correct it, than we can tell the cause of a timid disposition or of dishonesty, and how to overcome these characteristics. It is by sympathy and understanding, and by removing the causes rather than by scolding, that the child may be helped to recover either from being underweight or from being dishonest.

It is impossible to estimate the amount of preventable human suffering which has been caused by the mistreatment and lack of understanding of children that have allowed them to grow up with unhealthy dispositions and characters. We know now that the golden age of character formation comes earlier than most people used to believe. The years before six are the most important ones.

Wonderful progress is being made in the effort to increase the health and happiness of children. The work of the doctors, nurses, dentists, and all special health workers is very important, but all of this is not enough without the cooperation of the teacher, who can give help, especially in relation to child health, that cannot be given in quite the same manner by anyone else.

WHAT THE TEACHER SHOULD KNOW ABOUT CHILD HEALTH

In addition to her good intentions the teacher must have certain knowledge and certain skills. She needs to know what good health is and to clearly understand the teacher's part in discovering health defects, and in helping to get these defects corrected. She needs to understand how to arrange her program in a healthful way, and what she can do to make the schoolroom and school yard as healthful as possible. In addition to knowing what she may do, she needs to know what the children in her grade should be taught about health and how they should be taught this.

The little baby is entirely dependent on others for the care of his health. He cannot in any way be held responsible for the kind of food he eats, for the degree of cleanliness he enjoys, or for the diseases to which he is exposed. If he does not learn to go to sleep alone in the dark or to wait for regular feeding time, it is entirely because no one has been wise enough to train him in these habits. Even the grown-up person in any community is aided a good deal by health officials and by other means in the care of his own health, yet it is expected that he will learn to do what he can to take care of himself and those dependent upon him.

TEACHING THE CHILD TO CARE FOR HIMSELF. When the child goes to school he is gradually passing from infancy to grown-upness. He must be directed along his course, which leads to larger responsibility and to a greater share in his own care and what he can do for others. To be one of his most helpful advisers is the teacher's task in health education. The details of this task will differ according to the age of the child. Later chapters will explain the special opportunities and kinds of health work of the teachers in the primary, intermediate, and junior high school grades. In this department is given essential information for every teacher regarding the problems of child health in all the grades.

CHAPTER TWO

HEALTH EXAMINATIONS AND POSITIVE HEALTH CARE OF PUPILS

POSITIVE health means an abundance of life and vigor as well as freedom from health defects and handicaps. While the personal care of the health of school children seems primarily to be a problem for parents, physicians, and nurses, yet each day it is becoming more evident that the teacher in any and every school has a wonderful opportunity, and a corresponding obligation, to help her pupils, not only by discovering and correcting defects, but by promoting positive health.

PHYSICAL HEALTH DEFECTS

Possible injurious effects of the more important physical defects of children may be classified as follows:

I. MALNUTRITION.

This is a serious health defect in children.

Most of the children who are 10 per cent or more underweight for height and age are handicapped from malnutrition. Twenty per cent at least of all school children are malnourished.

Malnutrition produces:

1. Lack of vitality and ambition.
2. Interference with growth and development of the mind and body.
3. Lessened resistance to many kinds of disease.

Malnutrition may be prevented or cured by:

1. Correction of defects, such as nasal obstruction, adenoids, diseased tonsils, and defective teeth.
2. Sufficient amount of proper food, chewed thoroughly, eaten regularly, and never hurriedly. Some fruit or well-cooked vegetables every day. No tea or coffee for growing children.
3. Warm midday lunches for all school children and one or two extra lunches daily until weight is up to standard,

4. Plenty of sleep and rest, always with windows in bedroom open. For a child with malnutrition—early to bed; one-half hour's rest in bed during the day; and all the outdoor air possible at all times.
5. Outdoor exercise and play every day.
6. Avoidance of overexcitement, worry, or other emotional disturbance, especially at mealtime or just before bedtime.

II. DEFECTIVE EYES WITH IMPERFECT VISION.

1. Headache, commonly through forehead or back of head or both.
2. Blurring of sight; but in farsightedness with eyestrain, vision may be exceptionally good, especially for distant objects.
3. Nausea and dizziness; sometimes disturbance of digestion, with resulting malnutrition.
4. Nervous exhaustion.
5. Nervous irritation and lack of nervous control, shown in muscular twitching of face, arms, and legs, or in winking frequently and squeezing the eyelids shut.
6. Mental inability to grasp an idea presented through the eyes.
7. Retardation in school.
8. In rare cases, convulsions.

Some medical authorities have attributed epileptic and epileptiform seizures to abnormal eyes.

III. DEFECTIVE EARS.

1. Catarrh of middle ear—danger of mastoid disease.
2. Deficient hearing—pupil often dull, careless, listless, inattentive, and mentally backward.
3. Retardation in school.
4. Pupils are often considered mentally defective when the only primary defect is imperfect hearing.

IV. ADENOIDS.

A. Structural effects:

1. High-arched palate.
2. Narrowing of upper jaw.
3. Deformity of chest, resulting from obstructed and imperfect breathing, shown by lateral depression of front of chest and prominent sternum (breast bone).
4. Disturbed development of teeth and vocal organs.
5. Large tonsils in one-third of cases.

B. Functional disturbances:

1. Mental:

- a. Disturbance in function of brain resulting in *aproschia nasalis*, that is, difficulty in forming an idea of anything new; stupidity; difficulty in retaining ideas; weakness of memory; inability to turn thought to a definite subject; lack of power of attention.
- b. Irritability, depression, and often disorderly conduct.
2. Deafness.
3. Defects in sense of smell and taste.
4. Defects in voice (nasal voice).
5. Chronic rhinopharyngeal catarrh, shown by a persistent nasal discharge. This is often one of the first symptoms. In very young children it is manifested by snuffles.
6. Obstruction of air passages resulting in breathing disturbances, manifested by open mouth and great restlessness at night, the child being forced to assume various attitudes, such as sleeping on face, in order to breathe better.
7. Reflex:
 - a. Catarrhal spasm of larynx, or croup.
 - b. Headache.
 - c. Intractable cough and hoarseness.
 - d. Bronchial asthma.
 - e. Enuresis (incontinence of urine).
- C. General effects:
 1. Malnutrition and anemia.
 2. Underdevelopment, physical and mental.
 3. Predisposition to *otitis-media* (middle-ear disease), laryngitis, colds of a remittent nature; increased susceptibility to disease infections, such as tuberculosis, diphtheria, scarlet fever, etc.
- D. Description of appearance of a child with marked adenoid enlargement—mouth open; dull, sleepy, with inquiring look; upper lip short and thick; upper jaw narrow; nasal orifices small and pinched, the face full under the eyes; listless and indisposed to physical or mental exertion; stupid and backward; in school, from one to two years behind the normal pupil of same age; undersized.

V. ENLARGED AND DISEASED TONSILS.

Enlarged and diseased tonsils produce many of the unfavorable results attributed to adenoids. The two conditions are often associated and it is difficult to distinguish between their effects. Enlarged and diseased tonsils increase susceptibility to (a) tonsillitis; (b) quinsy; (c) diphtheria; (d) rheumatism; (e) tuberculosis; (f) pneumonia; and other forms of infection.

The presence of enlarged and diseased tonsils and adenoids in school children should be known, and when any disturbances of health can be attributed to them by a competent physician, these structures should be removed. Their absence in such a case is an unqualified advantage.

VI. DEFECTIVE TEETH.

Sir William Osler, of London, a leading world authority in medicine, has stated: "If I were asked to say whether more physical deterioration was produced by alcohol or by defective teeth, I should unhesitatingly say, defective teeth. In some schools as many as 98 per cent of pupils have defective teeth. From 50 to 75 per cent of all school children in this country need at this moment dental care."

A. Direct effects:

1. Pain of excruciating type resulting in great loss of time and rest.
2. Foul breath with unsightly and inflamed mouth.
3. Improper mastication of food.
4. Extension of decay in sound teeth.
5. Decay of temporary teeth resulting in unsound and carious permanent teeth.
6. Infection of glands.
7. Infection of maxillary (jaw) bone.
8. Earache with *otitis-media* (middle-ear disease) and deafness.
9. Headache.
10. Disturbance in function of eye.
11. Frequent digestive disturbance.

B. Indirect effects:

1. Conditions of poor nutrition and lessened resistance to disease.
2. Formation by carious teeth of an almost perfect culture bed for growth of pathogenic bacteria. This condition with lowered resistance leads to increased frequency of infection with pneumonia, diphtheria, rheumatism, heart disease, etc.
3. General infections dangerous to life in some cases.
4. Results which accompany defective hearing.
5. Lowering of vitality and temporary or permanent ill health.

VII. The condition of the skin is an important indication of the general tone and health condition of the body. Persistent eruptions should be noted and treated.

- VIII. Abnormal condition of the heart, even if temporary, may disturb health, and if neglected may result in permanent weakness of the heart itself or of the body in general. The condition of the heart is always an important index of the health condition, and is often a valuable guide in adjusting the amount of sleep, arrangement of school program, and selection of muscular exercise which is most suitable for the pupil.
- IX. The lungs are important as a frequent location of tuberculosis. Lung tuberculosis is more frequent among school children than has commonly been supposed. In pupils who are underweight, anemic, lacking in vitality, even if they do not cough, the lungs should be carefully watched.
- X. Deviation of spine, roundness of shoulders and stooping postures are common among boys and girls, especially between the ages of 11 and 16. Many children outgrow these conditions without special attention, but these asymmetries should be inspected from time to time to prevent, so far as possible, the more chronic defects in posture and the occasional cases of genuine scoliosis (curvature of the spine) which begin so insidiously. Defects of the arches of the feet may interfere seriously with activity and healthy development. They should receive careful attention.
- XI. Abdominal hernia (rupture) involves serious and often dangerous weakness of the abdominal walls. It is important for the welfare of children, in the occasional cases which exist, that the condition should be detected and given appropriate treatment.

PREVALENCE OF HEALTH DEFECTS. It is estimated that three out of every four school children suffer from physical defects. Most of these defects could be prevented if taken in time, and a large share of them can be entirely corrected or improved. In detail, it is estimated that:

15 to 25 per cent of children are malnourished.

10 to 12 per cent have defects of vision.

8 to 12 per cent have defects of hearing.

30 to 40 per cent have adenoids and diseased tonsils.

50 to 98 per cent have decayed teeth.

25 to 40 per cent have defects of posture and foot arches.

These are some of the health defects found most frequently. Others, fortunately less frequent, such as diseases of the

heart, lungs, and other vital organs, may be even more serious, but it is of great importance that all defects, minor as well as great, be discovered.

VALUE OF REMOVING DEFECTS. Once the defects are discovered and removed, wonderful things may be accomplished in making children happier and more robust, better able to do their work at school, to play their games, and to be good citizens, generally. Frequently, children who are backward or retarded in their studies because of some reason other than incurable mental deficiency, will "make the grade" after such physical defects have been removed.

A prominent city school superintendent in the United States asserts that in the schools of his city the number of retarded pupils (repeaters in the grades) has been reduced more than 50 per cent by the correction of defects of the teeth.

If not remedied, defects may cause death or lifelong invalidism, whereas the removal of physical limitations has often resulted in a life that was of great credit to the individual himself, to his family, and to his country.

THE HEALTH EXAMINATION

Every school child should have a health examination at least once a year, and more frequently if he is found to be in need of special attention. This is just as necessary as the careful inspection of elevators, automobiles, or steam engines. The best kind of health examination is one that is made by a physician who is interested, and who believes in health examinations.

The examination and the follow-up work that will bring the real value to the child must involve the cooperation of the teacher, parents, and physician. If a physician is not available for school health examinations, the best possible preliminary health inspection should be given by a school nurse, and if there is none, by the teacher. This preliminary examination which the teacher may find it necessary to give, and the main purpose of which is the discovery of health

defects which need a physician's care, has been successfully carried out in several cities of the United States, Detroit in particular, with excellent results. In any case, the teacher may well make the tests of sight and hearing.

When a physician makes health examinations in the schools, it is highly desirable to have the parents invited to be present; it is very important that at least one parent be there. This makes it possible to explain most effectively to the parents the health needs of the child, as well as the attention which should be given. The health service needed by many school children today requires the services of physicians and dentists, and when available, hospitals and clinics. In certain cases dental hygienists (special dental nurses) may be necessary. Nutrition experts, teachers, and supervisors are of great help in providing care for undernourished children and in securing good standards in the school lunches.

A continuous year-to-year record of the health examinations, including notation of accidents and illnesses, as well as correction of defects, should be kept for each child, and his record should go with him from grade to grade or from school to school.

MALNUTRITION

The most important health defect in childhood is undernourishment or malnutrition. No less than 20 per cent of our school children are seriously malnourished. This means that they lack vitality and ambition, that their growth is interfered with, and that their resistance to disease is lessened. Every child needs food enough to supply him with all the energy and growing material that he requires; he needs food of the right kind to furnish material for the different parts of the body, such as brains, nerves, bones, teeth, blood, and muscle; and he needs other materials which will help to regulate the processes of the body and protect him from various diseases.

It is quite possible for one to be malnourished even though

he is getting enough food of the right kind: some condition may prevent his body from receiving the benefit of the food which he is eating. The child may have adenoids; his posture may not be correct; he may not have the right sleeping conditions—any one of which would prevent him from getting the right air supply, which in turn bears direct relationship to the value received from the food he eats. He may be under a nervous strain from fear, worry, eyestrain, or over-excitement, which will hinder the proper digestion of the food. He may have diseased tonsils, decayed teeth, or tuberculosis, in which case the body must use energy from the food to overcome the disease. If the child does not get enough sleep and rest he may be spending so much of the value of his food that not enough remains for proper growth. He may not be getting enough exercise which would cause him to breathe deeply, thereby setting the blood to circulating fast enough to keep the body working well, and to distribute the food to all parts of the body. Malnourishment, then, may be due to a lack of enough food, to the wrong kind of food, or to disturbing conditions which prevent one from using in the proper ways the energy derived from food.

HOW TO FIND THE MALNOURISHED CHILDREN

BY WEIGHING AND MEASURING. Every child should grow. The easiest way to find out whether a child is growing and how fast is to weigh and measure him at regular intervals. Every intelligent mother knows that one of the best indications of the health of her baby is a consistent gain in weight, yet a gain that remains near the normal weight for the baby's age. It is not so well recognized that for growing children of all ages there is a normal standard of weight and height. Many parents stop weighing their children after the days of babyhood have passed, although the process is just as important for childhood as for babyhood. If the child varies widely from the standard, a careful study should be made to discover and remove the cause. A study of thousands of chil-

dren was made to determine the rate of growth, and the results are summarized in the tables¹ which are shown on the following pages.

How to determine height and weight. To weigh and measure children it is necessary to have scales and a height-measuring apparatus. If there are no scales, a campaign should be planned to get them. A community organization, such as a parent-teacher group or the Grange, often enjoys working for some definite object, and scales for the schoolroom would be a most appropriate gift. Since their purchase is also one of the ways in which school funds might be used, school authorities may be persuaded to buy them. Good scales which will give service for many years may be purchased for twenty-five or thirty dollars. A spring scale cannot be relied upon for accuracy.

If there are no scales in the school, it is suggested that temporary use be made of some in the vicinity. Perhaps the owner of a near-by grocery store will allow the children to come in to be weighed, or a neighboring farm may be even more convenient. If the teacher will join the children in an attempt to reach the correct weight, it will have a most desirable effect upon their attitude toward the process and its worth.

The children should remove all outdoor wraps before being weighed. It is best to have the shoes removed also, although this takes additional time, and may cause embarrassment to those whose stockings are ragged. It must be remembered, however, that the heavy footwear often worn during the winter and muddy seasons may add several pounds, and that apparent gains and losses in weight may be due merely to a change from summer to winter clothing and shoes. Have the child stand in the center of the platform, and record the weight to the nearest quarter of a pound.

Weigh all of the children once a month; those who are underweight and are trying to gain should be weighed once a week. Always weigh the children at the same time of day,

¹ Prepared by Bird T. Baldwin, Ph.D., and Thomas D. Wood, M.D.

WEIGHT—HEIGHT—AGE TABLE FOR BOYS OF SCHOOL AGE

Hght. (ins.)	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	Hght. (ins.)
38	34	34*														38
39	35	35														39
40	36	36*														40
41	38	38	38*													41
42	39	39	39*	39*												42
43	41	41	41*	41*												43
44	44	44	44	44*												44
45	46	46	46	46*	46*											45
46	47*	48	48	48	48*											46
47	49*	50	50	50	50*	50*										47
48		52	53	53	53	53*										48
49		55	55	55	55	55	55*									49
50		57*	58	58	58	58	58*	58*								50
51			61	61	61	61	61	61*								51
52			63	64	64	64	64	64	64*							52
53			66*		67	67	67	68	68*							53
54				70	70	70	70	71	71	72*						54
55				72*	72	73	73	74	74	74*						55
56				75*	76	77	77	77	78	78	80*					56
57					79*	80	81	81	82	83	83*					57
58					83*	84	84	85	85	86	87					58
59						87	88	89	89	90	90	90				59
60						91*	92	92	93	94	95	96				60
61							95	96	97	99	100	103	106*			61
62							100*	101	102	103	104	107	111	116*		62
63							105*	106	107	108	110	113	118	123	127*	63
64								109	111	113	115	117	121	126	130*	64
65								114*	117	118	120	122	127	131	134	65
66									119	122	125	128	132	136	139	66
67									124*	125	130	134	136	139	142	67
68										134	134	137	141	143	147	68
69										137	139	143	146	149	152	69
70										143	144	145	148	151	155	70
71										148*	150	151	152	154	159	71
72											153	155	156	158	163	72
73											157*	160	162	164	167	73
74											160*	164	168	170	171	74

Age—Years		6	7	8	9	10	11	12	13	14	15	16	17	18	19
Average height (inches)	Short.....	43	45	47	49	51	53	54	56	58	60	62	64	65	65
	Medium.....	46	48	50	52	54	56	58	60	63	65	67	68	69	69
	Tall.....	49	51	53	55	57	59	61	64	67	70	72	72	73	73
Average annual gain (lbs.)	Short.....	3	4	5	5	5	4	8	9	11	14	13	7	3	
	Medium.....	4	5	6	6	6	7	9	11	15	11	8	4	3	
	Tall.....	5	7	7	7	7	8	12	16	11	9	7	3	4	

*Starred figures represent smoothed or interpolated values. The figures not starred represent exact averages in round numbers.

for there may be more than a pound of difference between weights taken at different times the same day. Attempt to keep the children interested in their weight and eager to watch their records; this will prevent the process from becom-

WEIGHT—HEIGHT—AGE TABLE FOR GIRLS OF SCHOOL AGE

Height (inches)	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	Height (inches)
38	33	33													38
39	34	34													39
40	36	36	36*												40
41	37	37	37*												41
42	39	39	39*												42
43	41	41	41	41*											43
44	42	42	42	42*											44
45	45	45	45	45	45*										45
46	47*	47	47	48	48*										46
47	49*	50	50	50	50	50*									47
48		52	52	52	52	53*	53*								48
49		54	54	55	55	56	56*								49
50		56*	56	57	58	59	61	62*							50
51			59	60	61	61	63	65							51
52			63*	64	64	64	65	67							52
53			66*	67	67	68	68	69	71*						53
54				69	70	70	71	71	73*						54
55				72*	74	74	74	75	77	78*					55
56					76	78	78	79	81	83*					56
57					80*	82	82	82	84	88	92*				57
58						84	86	86	88	93	96*	101*			58
59						87	90	90	92	96	100	103*	104*		59
60						91*	95	95	97	101	105	108	109	111*	60
61							99	100	101	105	108	112	113	116	61
62							104*	105	106	109	113	115	117	118	62
63								110	110	112	116	117	119	120	63
64								114*	115	117	119	120	122	123	64
65								118*	120	121	122	123	125	126	65
66									124	124	125	128	129	130	66
67									128*	130	131	133	133	135	67
68									131*	133	135	136	138	138	68
69										135*	137*	138*	140*	142*	69
70										136*	138*	140*	142*	144*	70
71										138*	140*	142*	144*	145*	71

Age—Years		6	7	8	9	10	11	12	13	14	15	16	17	18
Average height (inches)	{ Short	43	45	47	49	50	52	54	57	59	60	61	61	61
	{ Medium	45	47	50	52	54	56	58	60	62	63	64	64	64
	{ Tall	47	50	53	55	57	59	62	64	66	66	67	67	67
Average annual gain (lbs.)	{ Short	4	4	4	5	6	6	10	13	10	7	2	1	
	{ Medium	5	5	6	7	8	10	13	10	6	4	3	1	
	{ Tall	6	8	8	9	11	13	9	8	4	4	1	1	

*Starred figures represent smoothed or interpolated values. The figures not starred represent exact averages in round numbers.

ing monotonous. The children who are above the primary grades may weigh themselves, but the teacher or some other responsible person in charge should do the monthly weighing.

All that is necessary to determine the height is an accurate measure on the wall. Nail to the wall two yardsticks or a new

tape measure, or draw an accurate scale. It is very desirable that the height be taken without shoes. Let the child stand flat against the wall with heels, shoulders, and head touching the wall. Place a right-angled piece of wood (a chalk box will do) firmly over his head and against the measuring scale. Avoid using a ruler or a thin strip of wood, as either may be tipped from horizontal, making a wide error in the reading of the height. Take the height to the nearest quarter of an inch. Measure the children for height two or three times during the school year.

How to record weight and height. The Class Room Weight Record¹ is a convenient device for the recording of the measurements.

Suppose it is September; that you have found that John weighs 45 pounds, measures $46\frac{1}{2}$ inches, and, by reference to records, that he was 8 years old last April. Take the height, weight, age table for boys. Find 46 in the left hand column, follow along this line to the column headed "8 Years," and you will find that the average weight for an eight-year-old boy, 46 inches tall, is 48 pounds. Enter 48 on the Class Room Weight Record in the column headed "Normal Weight." Next February remember that John's age will be recorded as nine years, even though he will not be nine full years until the following April. Enter age to the nearest year, height to the nearest inch, and weight to the nearest pound. Record half years, inches, or pounds as the next whole unit below; that is, if a child is $10\frac{1}{2}$ years old and weighs $60\frac{1}{2}$ pounds, record his age as 10 years and his weight as 60 pounds.

How to find the percentage of variation from normal. Children who are advanced enough may work out their own percentages of variation from the normal average as a part of an arithmetic lesson. For example, if a girl weighs 79 pounds and the normal average weight for her height and age is 83 pounds, she is then 4 pounds underweight. In arithmetical

¹These may be obtained from the Department of the Interior, Bureau of Education, Washington, D. C., or from the American Child Health Association, New York City. Price, 3 cents per copy.

terms the question then is—4 is what per cent of 83½—and the answer (to the nearest per cent) is 5 per cent. The girl is then 5 per cent under average weight for her age and height.

The busy teacher need not take time to find out the per cent by which each child's weight varies from the average. She should, however, go through her list and make a note of those who are 10 per cent or more underweight. This calculation should take but a few minutes after the class weight record has been made out. Find 10 per cent of the normal weight by (mentally) pointing off one place in the normal weight. If the resulting figure is more than the number of pounds by which the child's weight differs from the average normal weight, then the child is less than 10 per cent under or overweight. For example, if the average normal weight for a child is 63 pounds and the actual weight is 55 pounds, then the child is 8 pounds underweight. Eight is more than 10 per cent of 63, and therefore the child is more than 10 per cent underweight.

To determine quickly the percentage of underweight, there is a very helpful small booklet called *Underweight Reference Tables*, which may be secured from the American Child Health Association, 370 Fifth Ave., New York City. The cost is 5 cents per copy. To demonstrate the use of this booklet: John's height is 46 inches; under the column headed "Height in Inches" find 46, then the age, and then the average weight for the height, which we found to be 48. The next three columns are headed, respectively, "7 Per Cent Underweight," "10 Per Cent Underweight," "15 Per Cent Underweight." Under the 7 per cent column we see that if John weighed 44 pounds he would be 7 per cent underweight. We need have no immediate cause for concern in John's case because he weighs 45 pounds.

Meaning of variations from average normal weight. No intelligent person will assert that all boys of the same age and height should weigh exactly the same number of pounds, but the normal weight for a child is somewhere within a certain zone or range of weights. Any child who continues

to be from 7 per cent to 10 per cent or more underweight for age and height should be examined carefully by a physician to find the cause. If no other sign of health defect than being slightly underweight is found, the child may be considered healthy. Some children who are from 15 to 20 per cent overweight improve in health when the weight is reduced.

OTHER SIGNS OF MALNUTRITION. A few children who are from 7 to 10 per cent below weight for height and age may be found to be in good health, but on the other hand, many who are up to or above the standard weight may be found to be poorly nourished, and in need of medical attention or better food or more rest. Other signs of poor nutrition which the teacher may notice are paleness, eyes lacking in luster, flabby muscles, round shoulders, stooping posture, prominent abdomen, weak feet, restlessness, irritability, timidity, inattention, and poor resistance to disease. Such signs may have other causes than poor nourishment, but if the teacher notices several of them, she should urge medical attention even if the weight is not below the normal range. It should be realized that rural children suffer as much from poor nourishment as do city children, and that undernourishment is just as common among the rich as among the poor.

TEACHER'S SHARE IN CURING MALNUTRITION

When you find children who are and continue to be 7 or 10 per cent underweight, or who show any of the other signs of malnutrition which have just been mentioned, use all of your influence to have those children given a thorough examination by a physician. In some cases the parents may be perfectly willing to have this done; in other cases, however, you may have to use all your tact and skill to persuade them to have the examination made. Let them see that you are willing to cooperate fully with them in helping the child.

If children are much below the normal weight, usually one or more of three things is true of them: (1) They have some physical defect, such as diseased tonsils or adenoids, a con-

dition which should be discovered and corrected by a physician; (2) they are not receiving the right kind or amount of food; (3) they are not getting enough rest because of a nervous strain, home conditions, or bad sleeping habits.

The school may very definitely do some things for this child by keeping close watch of his progress through weekly weighings rather than monthly. He should receive special encouragement for gains.

If possible, have in the schoolroom some arrangement by which children who need it may lie down. A couch in the corner of the room may be used. Blankets spread out on a bench are a possibility. In a few exceptionally well-equipped large school buildings there may be a special room with cots, and a nurse in charge. Older boys may be able to make some folding cots by joining two X pieces of wood by longer pieces and tacking on canvas in the style of an army cot. Children who are seriously malnourished, particularly those who come to consolidated schools and have a long day away from home ahead of them, should lie down for a part of the school day. They may need this rest, temporarily, more than the outdoor romping with the other children.

What the teacher may do about the food the malnourished child gets depends partly upon the custom of the school in regard to serving milk lunches or hot noon meals. This topic is discussed more fully later (p. 361). A mid-morning lunch of milk and a cracker is a help. The teacher may also help the child by her health teaching, methods of which are discussed in the volumes of *THE CLASSROOM TEACHER* which deal with children of different ages.

WHAT THE TEACHER SHOULD KNOW ABOUT NUTRITION

The teacher needs to understand the essentials of a good diet not only for her own sake, but that she may teach the children, and be able to talk with parents and help them with this rather difficult problem. Since the body is built entirely

from food that is eaten; and since its energy comes from the same source as all of the material that regulates the processes of the body, the kind of food and the way it is prepared and eaten are of the greatest importance in making health possible. Yet, strange to say, calves, pigs, and chickens are frequently more carefully fed than are children! Food should be given to children in the right amount. It should be of the right kind, cooked and served in an appetizing manner. It should be eaten in an atmosphere that is happy and free from hurry.

HOW FOODS ARE MEASURED

The amount of food may be measured in terms of weight, as pounds and ounces; or in terms of volume, as in spoonfuls, cups, and slices. These measurements may amount to very little because foods vary greatly in food value. Food is also measured in terms of how much energy or building material, or regulating and protecting material it contains.

The energy that may be procured from food is expressed in terms of calories. These are terms by which those who work in the science of food measure the amount of body-building material, including protein—which is especially important in building the soft tissues—and the minerals—calcium, phosphorus, and iron, needed especially for the growth of bone. Vitamins are regulating and protecting substances which are very necessary for children because proper growth cannot occur without them.

The amount of the different vitamins in food is so difficult to measure that even specialists in food study do not try to tell just how much there is of a certain vitamin in a given food, but merely say that the food is rich, very rich, poor, or lacking in this vitamin.

THE DIFFERENT USES OF FOOD

Much study has been given to finding out the best kinds of food for human beings, particularly for children, and many important facts about the use of such foods are now known.

Following are some of the important facts that may be found in the books which contain careful studies of the question:

1. *Food for energy:*

The body needs food to supply its energy; that is, to give power to work and play, to think, and to keep warm. The foods which do this are:

a. The starches, which are found in large quantities in breakfast foods, bread, macaroni, rice, potatoes, cornmeal and cornstarch, beans and peas.

b. The sugars, found in fruits of almost all kinds, particularly dried fruits, such as raisins, dates, and figs; honey and molasses; foods which contain white sugar, such as cake, cookies, and desserts (good foods, but care should be taken that they are not eaten in large amounts, or at times when they take away appetite for other foods).

c. The fats. Butter and cream contain the best fats, particularly for growing children. Others are bacon, meat fat, peanut butter; fats used chiefly in cooking for "shortening," as lard, Crisco, oleomargarine, and other vegetable fats.

2. *Food for building material:*

a. For the building of muscle, some of the best foods are milk, eggs, cheese, lean meat, fish, beans, peas, and cereals.

b. For building bones and teeth, and for furnishing other minerals, particularly iron for the blood, the best foods are milk, cheese, egg yolk, green leafy vegetables, whole grain cereals and breads, prunes, raisins, and figs.

3. *Food for regulation and protection.*

The body needs certain foods, called vitamins, which are essential for growth and good health and are especially important for children. The following foods contain one, two, or more of the several types of vitamins: milk, butter, cream, egg yolk, vegetables (especially the leafy vegetables, such as spinach and cabbage), tomatoes, fruits (particularly oranges and other raw fruits).

4. *Food for "roughage."*

This type of food containing some indigestible matter is necessary in order that the muscles of the intestines may be

active and have something to pass along and thus prevent constipation. Some of the foods containing this material are: raw fruits, prunes, figs, vegetables, whole grain cereals and breads.

5. *Water.*

An important part of the weight of the body is made up of water, and water is necessary for all of its processes.

PRACTICAL SUGGESTIONS FOR DIET

All the discussion of classes and measurements of food may sound very complicated, and when followed out in the detail of scientific study, it is complicated. Yet if a few principles are known and practiced in the planning of food for the day, the most serious errors will be avoided.

1. Milk is essential in the diet of the growing child. Careful experiments show that for the best development he should have a quart of milk in some form each day. He may drink the pure milk, or have it in some other form, as cooked in soups, custards, puddings, or other foods.

2. In every day's diet there should be liberal amounts of vegetables (other than potato), particularly the leafy vegetables, such as spinach.

3. Breakfast foods and breads should be included. Part of the breakfast foods and breads should be of whole grain, such as oatmeal, shredded wheat, wheatena, Pettijohn's, and similar foods.

4. Fresh fruits, such as oranges and apples, and raw vegetables, such as lettuce and chopped cabbage, should be included in the daily diet.

5. Candy and sweet foods should not be eaten between meals. Since they dull the appetite for other foods, they should be eaten only at the close of a meal, and then moderately.

6. Tea and coffee are not good for growing children.

7. Every child should have a good breakfast before going to school.

REPRESENTATIVE DIETS

Here are given a few representative meals, which, if carried out, will give about the right quantity and variety of foods.

Breakfast

Fruit: fresh fruit (orange, apple, or grapefruit) or baked or stewed fruit (baked apple or prunes).

Cereal: whole grain cereals, such as oatmeal, Pettijohn's, shredded wheat.

A glass of milk.

Bread and butter: white bread or whole wheat bread, which may be toasted, graham muffins, or corn bread.

An egg or bacon if desired.

Dinner

1. Soup: made with milk, such as a cream of vegetable soup.

Meat and potato hash.

Spinach or lettuce.

Bread and butter.

A simple dessert (junket).

2. A stew with two or three kinds of vegetables.

Salad of fresh fruit or lettuce.

Graham bread and butter.

Pudding (rice and raisins).

Milk.

3. Chowder.

Vegetable (string beans).

Baked potato.

Plain cooky and milk.

Supper

1. Milk toast.

Baked potato.

Bread and butter.

Milk.

Fresh or stewed fruit.

2. Spinach soup with milk.

Corn bread with sirup.

Cottage cheese.

Ginger cookies.

- | | |
|-------------------------|---------------------------|
| 3. Rice and milk. | 4. Baked rice and tomato. |
| Brown bread and butter. | Cottage cheese and prune |
| Plain cookies. | salad. |
| Milk. | Whole wheat bread and |
| Plain custard. | butter. |

SOURCES FOR FURTHER INFORMATION

A study that takes up the child's need of food in terms of classes of food and amounts of food for each particular child is very valuable for every teacher. The time will soon come when every educated person will be as much ashamed not to know the fundamentals of food values as he would be not to know how to do long division.

Find out whether your city, state, or county system is giving a course in food values for teachers. The American Child Health Association, New York City, has made available certain valuable material which may be procured from them. "Diet for the School Child" by Lucy Gillett and "Milk and Our School Children" by Bernice Reaney may be had from this association for 5 cents each, and "The Nutrition Class" by Charles H. Smith for 20 cents a copy. From Washington, D. C., at the Bureau of Publications you may get Bulletin No. 55, "Milk, the Indispensable Food for Children" and Bulletin No. 59, "What is Malnutrition?" Florence Winchell has written a little book called "Food Facts for Every Day" that is published by the J. B. Lippincott Co., Philadelphia. All this material you will find very much worth while and very readable.

THE SCHOOL LUNCHEON

CHILD'S NEED FOR A WARM LUNCHEON. All children need a good noonday meal, with at least one warm dish in it, particularly those who come from some distance and cannot go home at noon. An unappetizing, cold luncheon of poorly chosen food, perhaps half eaten at recess or hurriedly eaten at noon, is a common cause of malnutrition. Every school—

even the one-room rural school—should provide one hot dish for the children at noon.

BRINGING FOOD FROM HOME TO BE HEATED. The one-room rural school teacher has little time to spend in preparing a luncheon. Such schools have found that the best way is to get the parents to cooperate in giving the child (in a glass jar with a cover) one food which may be heated at school. The necessary school equipment will include an oil stove, a blue flame double boiler, and a wash boiler with a wooden rack in the bottom. The children may put their jars of food in this boiler on the rack, which is covered with water, and set the boiler on the stove. About half an hour before noon, the teacher or some responsible pupil may light the stove. When the noon hour has come, the food will have been thoroughly heated. Suitable foods to bring in the jar are thick soups and scalloped dishes, occasionally cereal or cocoa. It is evident that this plan will not work without the help of the parents, who must be interested enough to do their share.

PREPARING A HOT DISH IN THE SCHOOLROOM. In other one-room schools one hot dish is prepared at the school. To do this a more extensive equipment is needed than that described in the preceding paragraph. A stove is necessary, as are also the following: a cupboard for supplies, a work table covered with oilcloth or a drop shelf attached to the wall, a soup kettle, a saucepan, and if possible a double boiler, dishpans, a quart measure, tablespoons, large mixing spoons, can opener, paring knives, asbestos mats, dishcloths, scrub cloths, and dish wipers. The children may each bring a cup, saucer, and bowl, or the school may purchase them.

Supplies may be brought from the homes of the children or the money may be furnished and the food bought by the pupils in charge of the luncheon for the week.

The work of preparing the meal should be done by the children in turn. One or two may be assigned to prepare the meal, others to serve it, and still others to wash the dishes.

Soups and chowders are two of the best kinds of food to serve. Occasionally cocoa may be made. If there is a small

oven for one of the burners, baked dishes such as a scallop, are easily prepared and add variety.

LUNCHEON IN A CONSOLIDATED SCHOOL. In schools of several rooms, unless there is a cooking class that handles the luncheon as a special project, a paid worker will be necessary, and a special room may be needed from which the luncheon may be served in cafeteria style.

In only a few schools will it be wise to attempt to serve more than one or two hot dishes. Other food will be brought from home in the lunch boxes. The best foods for the lunch box are sandwiches, fruit, and a bottle of milk. The fruit may be fresh, or a small glass jar of stewed fruit or apple sauce may be included.

CONSERVING THE SIGHT OF THE SCHOOL CHILD

THE EYE AS A CAMERA. The eye is like a camera in many ways. On the outside is a protecting coat which corresponds to the box of the camera. The front part of the coat is called the cornea, and is transparent; the rest of it is the white of the eye. Just back of the cornea or pupil is the lens, which does the same thing in the eye that it does in the camera, that is, it makes a picture. In the camera the picture is thrown on a sensitive film or plate, where it makes a record which can be "developed" and kept as a photograph. In the eye the picture is thrown on a sensitive layer called the retina, which is very abundantly supplied with branches of the optic nerve. This nerve carries the message to the brain—and we see.

ADJUSTING TO AMOUNT OF LIGHT. The eye does not merely reflect a picture without effort as does a mirror. Many delicate parts of the eye must work together to make us see. The iris of the eye is a circular curtain, usually colored brown, gray, or blue. It contains circular muscles that control the size of the opening or pupil of the eye, through which light passes. The iris must constantly adjust the size of the pupil to the strength of the light. The dimmer the light, the wider

does the pupil open. A flickering light is particularly bad for the eye because it keeps the muscles of the iris constantly working, yet these muscles cannot work rapidly enough to protect the nerves in the retina from the strain of the changing light. The iris cannot close enough to protect the retina from extremely bright light, as that, for instance, which comes from the light of the sun shining on and reflected from a book which one is reading. On the other hand, if a person is trying to see accurately in too dim a light, it is bad for the

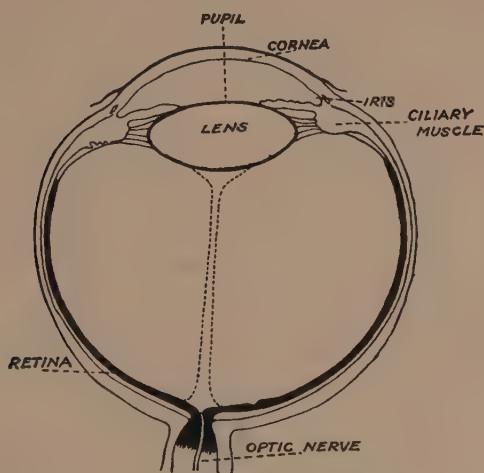


Diagram showing horizontal section of the eyeball

eyes because the picture on the retina is not clear cut enough for the eye to get the picture without strain. Reading or doing fine work with light that is too bright or too dim, or which comes from in front of the eye, is one of the chief causes of eyestrain.

FOCUSING THE EYE. If you have used a reading glass or a microscope, or have watched the operator of a stereopticon or movie lantern attempt to get a clear picture on the screen, you realize how important it is to get the right "focus." That is, in order to get a clear picture, the lens must be placed at the right distance from the object. The lens in the

eye cannot change its position when we change from looking at distant objects to near ones, therefore it must adjust its focus to the distance by changing its shape.

The lens of the eye is not a stiff body like a piece of glass, but it is soft, somewhat like a stiff elastic gelatin, and its shape can be changed by the pull of the ciliary muscles. The lens of the normal eye is so made that when we are looking at objects twenty feet or more away from us, a clear picture is thrown on the retina without the pull of the ciliary muscles; however, when we are looking at nearer objects, particularly those within two or three feet of the eye, the ciliary muscles must be pulling to make the lens the right shape to focus the picture.

There is a simple experiment which will make you feel quite clearly the pull of these muscles. Look at the opposite wall of the room, and at the same time hold a pencil directly in front of the eyes and about a foot away from them—then quickly change from looking at the wall to looking at the pencil. You will feel something pull inside the eye. Part of this feeling is due to the pull of the ciliary muscles in adjusting the focus of the lens to the near object. Remember that whenever a person is reading or doing other fine, close eye work, the ciliary muscles are continually working. Then you will understand why much school work is tiring to the eyes, and why looking up from your work, or playing out of doors is restful for them.

MOTION OF THE EYEBALLS. The eyes must be turned in the direction of the object which the person is trying to see clearly. Each eye has three pairs of muscles controlling this work. When one is reading, these muscles are constantly working, since the eyes must change their positions several times within the length of a single line. Watch closely the eyes of a person who is reading a book, and notice how very active are the muscles that move the eyeball. Close watching of a moving object brings a strain upon the eye because both the muscles that move the eyeball and the muscles that focus the lens must work. For similar reasons, reading on

the train when the book or paper is constantly moving is a strain upon the eyes.

HOW GLASSES AID THE EYE. If the lens of the eye is curved too much or is too flat, or if the lens or other parts of the eye have irregularities, these conditions respectively cause nearsight, farsight, and astigmatism. Under such conditions the muscles of the eye are unable to make the lens focus correctly—that is, form a clear picture; or they have to work so hard to make the focus that the eye gets tired very quickly. Glasses are mechanical devices which give the eyes another pair of lenses to counterbalance the defects in the eyes themselves, thereby relieving the strain and helping the eyes to form clear pictures. From 10 to 12 per cent of our school children have eye defects so serious that they should be relieved by well-fitting glasses. This applies, of course, to those children who have not already had defective vision corrected.

THE SNELLEN VISION TEST. There are simple tests which any teacher can easily learn to give, tests that will enable her to pick out many of the children whose eyes should receive the attention of an oculist. The test by means of the Snellen Letter Chart is one of the best known.¹

Hang the Snellen test letters in a clear light. They should be on a level with the head, the light coming from behind or from the side of the person who is to take the test. The child should not face a strong light. Have him stand twenty feet from the letters. Cover one eye, without pressure on the eyeball, and have the child read aloud, from left to right, the smallest letters that he can see on the card.

Recording the acuteness of vision. Above each line of the test letters there is a number which shows the distance—in feet—at which these letters should be read by the normal eye. From top to bottom, the lines on the cards are numbered 50, 40, 30, and 20, respectively. At a distance of 20 feet the average normal eye should read the letters on the 20-foot

¹Snellen Test Charts may be obtained from the State Education Department or from educational supply houses.

line, and if this is done correctly, or with a mistake of only one or two letters, the vision may be noted as 20/20, or normal. In this fraction the numerator is the distance in feet at which the letters are read, and the denominator is the number over the smallest line of letters read. If the smallest letters which can be read are on the 30-foot line, the vision will be noted as 20/30. If the letters on the 40-foot line are the smallest that can be read, then the record will be 20/40. If the letters on the 50-foot line are the smallest that can be read, the record will be 20/50.

If the child cannot see the largest letters—those on the 50-foot line—have him approach slowly until he reaches the distance from which they can be seen. If 5 feet is the nearest distance from which the 50-foot letters can be read, the record will be 5/50, or 1/10 of normal.

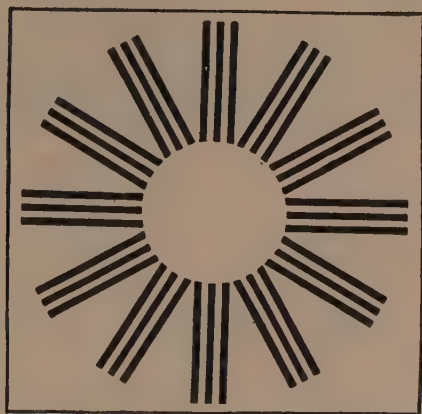
Test the second eye, the first being covered with the card, and note the result as before. With the second eye have the child read the letters from right to left, to avoid memorizing. To prevent reading from memory, a hole one and one-half inches square may be cut in a piece of cardboard, which may be held against the test letters so as to show only one letter at a time. It may also be moved about so as to show the letters in irregular order. The Snellen Letter Chart must be kept where it cannot be seen and memorized. A mistake of two letters on the 20- or 30-foot line, and of one letter on the 40- or 50-foot line may be allowed.

ASTIGMATISM. This defect of vision is a little more difficult to detect than others and can be corrected only by the wearing of properly ground glasses. If the astigmatism is considerable, it may be detected by using the figure on page 367. This figure should be placed in a good light at a distance of from eight to ten feet from the pupil, and the eyes should be tested both separately and together. If, in looking at the figure, one or more sets of lines—either the horizontal, vertical, or diagonal sets—appear brighter than the others, or if some may be seen distinctly while others are blurred, there is some astigmatism present. This should be told to parents

with the recommendation that they consult a reliable oculist.

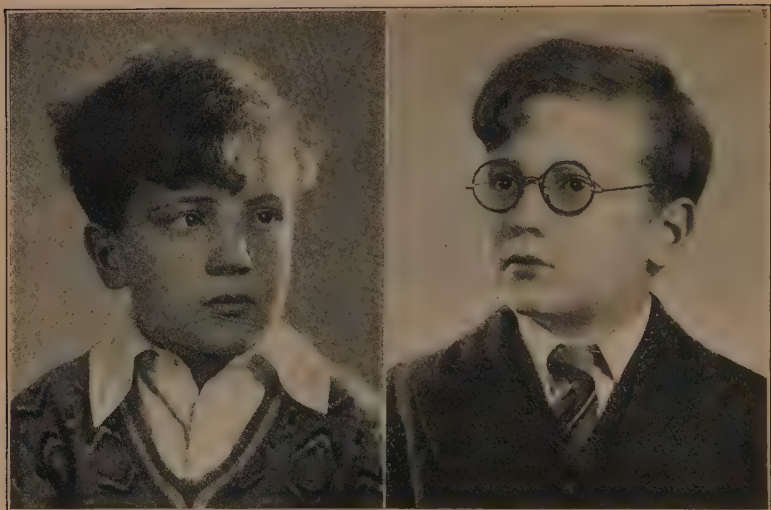
OTHER SIGNS OF VISION DEFECTS. The child may have 20/20 vision as tested by the Snellen chart, and yet have other defects of vision which are causing eyestrain and which need attention and correction. The teacher should note whether:

- a. The child habitually holds head too near his book (nearer than 12 inches).
- b. The child frequently complains of headache, especially in the latter portion of school hours.
- c. There is any, even a temporary, tendency to cross the eyes.



This figure may be used for the detection of astigmatism

REPORTING THE CHILD FOR SPECIAL CARE. If the teacher finds that the child's vision is 20/40 or less in either eye, or if he has other signs of disturbance of vision, the teacher, nurse, or other person responsible should notify the parents of his condition and suggest that the child be taken to an oculist. After a week or two, inquire as to what has been done about it. If nothing has been done by the parents, visit the child's home and urge the necessity of prompt attention. If this brings no results, consult the proper school authorities as to the possibility of taking the child to a free clinic, or of helping him in some other manner to receive the proper care.



A typical case of corrected vision. The wearing of glasses improved the child's eyes, his scholarship, and his appearance

CARE OF THE CHILDREN'S EYES IN SCHOOL. The teacher should keep a list of the children who are supposed to be wearing glasses, and check the list frequently to see that glasses are being worn. It frequently happens that children will use glasses only at occasional times, either forgetting them or deliberately leaving them off.

See that the glasses are kept clean, and if necessary instruct the child in the proper way of cleaning the glasses. Use only a soft, clean cloth. Soap and water may be necessary to remove grease. Hold the glasses by the lens that is being cleaned, so that bows and bridge may not become bent. Never put the glasses down in such a manner that the lenses touch any hard substance. The bows and frames should be kept so adjusted that the lenses are on the same level, and that the child will look through the center of the lenses. Frequently the bows or bridges of glasses become so greatly bent that, as they are worn, the glasses do more harm than good. If the glasses need adjustment, they should be taken immediately to an oculist.

Seat those children who suffer from defective vision in the front part of the room.

Give attention to the proper lighting of the room. Pull the shades to prevent a glare when the sun is shining directly into the room. At other times arrange the curtains to permit an abundance of light to enter through the upper part of the window. Schoolroom curtains should be adjustable from either top or bottom. On dark days use the artificial light.

In the best school buildings, blackboards are not put directly next to the windows. If there are such boards in your room, do not put work on them for children to study or copy. While charts or maps are being used, they should not hang too near the window.

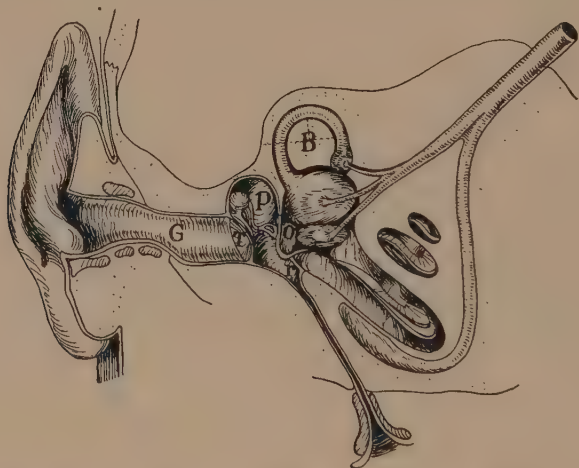
THE HEARING OF THE SCHOOL CHILD

DESCRIPTION OF THE EAR. The ear consists of the external visible part, which is continuous with a tube that leads into the head and ends in a membrane called the eardrum; a middle portion opening by the Eustachian tube into the throat and across which are strung three little bones; and an inner portion made up of intricate spaces in the skull, in the lining of which spaces are the endings of the nerve of hearing, or the auditory nerve. Sound waves of the air pass through the outer ear, set the eardrum in vibration, pass over the little chain of bones which extends to the middle ear, and thus set into vibration the liquid in the spaces of the inner ear. The auditory nerve is able to detect these vibrations, and when the nerve carries the report of them to the brain, we say that we hear.

TESTS FOR HEARING. It is more difficult to give a standard test for hearing than for vision. There are difficulties in getting a room of uniform quietness and sound transmitting properties, and in getting a sound of uniform strength. Although watches and mechanical devices are sometimes used, the best test sound is the whispered voice. If possible, the same person should make the examination for an entire

school in order that uniformity of method may be insured.

The test should be made in a room as quiet as possible, and not less than twenty-five or thirty feet long. Mark the floor with parallel lines one foot apart. The test consists of



Vertical section of right ear: G. External ear canal. T. Eardrum or tympanic membrane. P. Middle ear, containing small bones. R. Entrance to Eustachian tube leading from middle ear to throat. O. Internal drum membrane separating middle ear from internal ear. B. Semicircular canal

numbers from one to one hundred given in a whispered voice that the normal ear could hear accurately at twenty-five feet, but not at a greater distance. It will take a little practice with several normal children for a teacher to adjust her voice to this standard.

Seat the child whose hearing is to be tested at one end of the 30-foot line. Have the child close his eyes or turn away from the teacher so that there will be no possibility of lip reading. Each ear should be tested separately, and the other ear should be closed firmly with the finger during the test. The teacher may move back and forth on the line marked out until she finds that longest distance at which the child can hear and repeat accurately the numbers as she whispers them. Record this distance for each ear.

Value of test for hearing. By the simple hearing test the teacher may discover those children whose hearing in either ear is decidedly below the average. They should be referred to a physician or ear specialist for examination. In many cases treatment can be given to relieve the deafness or to prevent its becoming worse.

The hearing test has shown that many children who were thought to be dull or inattentive appeared so simply because of their handicap of deafness. Such children may be helped by seating them in the front of the room, and by giving them special care to insure for them the best possible chance of hearing.

CARE OF THE EAR. The most common cause of deafness is the spreading of inflammation or infection of the throat (due to colds, diseased tonsils, adenoids, scarlet fever, diphtheria, and other forms of infection) through the Eustachian tube to the middle ear. Infection in the middle ear will usually cause earache. Sometimes the pressure of the material which accumulates in the middle ear will puncture the eardrum and thus impair, though perhaps not destroy, hearing. The infection may spread into the spaces connected with the inner ear and become dangerous to the very life of the child. Because of these dangers, earache or any discharge from the ear should receive the immediate attention of a physician.

The pushing of hairpins, "earspoons," or other objects into the ear, either in play or in the attempt to clean the ear, may injure the eardrum and impair hearing. In cleaning the ear, nothing should be put into it but the finger, covered with a soft, wet washcloth. If wax becomes hardened in the ear, its removal should be attempted only by a physician.

ADENOIDS AND TONSILS

ADENOIDS. Adenoids are finger-like, spongy masses which grow in the upper back part of the throat. During a cold they become inflamed and enlarged. After the cold is over they may remain enlarged, and thus obstruct air passages so



Appearance of child before and after removal of adenoids

that the child is forced to breathe through his mouth. If the adenoids are large, the child may have "snuffles" or a running nose most of the time, and he will be likely to get another cold very easily. The child with adenoids usually has a dull, sleepy look, an open mouth, and a short, thick upper lip. Often he is stupid, backward in his grade, and undersized for his age. His voice is apt to be unpleasant. Frequently trouble which begins in adenoids spreads to the ear and causes deafness and earache.

DISEASED TONSILS. Tonsils are masses of tissue at the back and sides of the throat. Often they cannot be seen, but if they become enlarged and swollen, even an inexperienced teacher could not fail to see them by looking in the child's throat when he faced the light, opened his mouth, and said "Ah." The size of the tonsils is not as important as their condition. If they are ragged, or have yellow masses or pits in them, they will probably cause the child much trouble.

Both enlarged adenoids and diseased tonsils are apt to be found in the same child, and the conditions they create are similar. Their presence makes the child more susceptible to

colds, sore throat, pneumonia, and other diseases. Diseased tonsils are the chief cause of rheumatism and heart disease. The child may be underweight and malnourished because of the drain on his vitality that is made by the effort to overcome their bad effects.

THE REMEDY. The remedy for enlarged and diseased tonsils and adenoids is a simple surgical operation. If their presence is suspected, the advice of a physician should be secured and followed. The absence of these organs does not harm the child, and if diseased their removal is a decided advantage. Remarkable improvements in health often follow their removal.

THE TEETH

PREVALENCE AND DANGER OF TEETH DEFECTS. From 50 to 75 per cent of our school children are in need of dental care. If this care is not given and their teeth are allowed to decay, many ill effects may follow. These include severe toothache, foul breath, soreness that prevents proper chewing of food, further spread of decay, indigestion, headache, loss in weight, and failure to make proper gain in weight. The bacteria or poisons present in decaying teeth may spread and cause abscesses at the roots of the teeth, or a disease of the jawbone. These conditions may lead to rheumatism or heart disease. The annoyance and discomfort of decayed teeth are apt to make the child irritable and nervous. Decaying teeth form a favorable lodging place for bacteria, and thus make their possessor more susceptible to contagious disease.

Not only should the permanent teeth be cared for, but it is important that the temporary teeth also receive care. Decayed temporary teeth may cause all the troubles which we have mentioned, and in addition their extensive decay may cause abscesses which will endanger the growth of the permanent teeth.

IMPORTANCE OF DENTAL CARE. Regular trips to the dentist will prevent tooth decay. A dentist can find weak

spots in the enamel of the tooth, and treat them to prevent decay from starting. If, in addition to the daily cleaning of the teeth, a dentist is allowed to give them a more thorough cleaning every three or six months, decay will rarely start. Even if decay has begun, the dentist can stop its progress before it becomes serious. The health record card should have a place for the recording of visits to the dentist and his O.K. on the condition of the teeth. The teacher, by cooperation with the parents and by encouraging the children, can do much to stimulate ambition for clean teeth records. The teacher who works in a system where there is a school dentist or a dental hygienist will know how to cooperate with him for the good of the children, and will be relieved of the need for personal inspection of the teeth.

A TEACHER'S INSPECTION OF THE TEETH. In a school system that has no dental program, the teacher, in her campaign for good teeth, should use her influence to have the parents see that the children are given dental care. An inspection of the teeth by the teacher will give her an idea of how clean the children are keeping their teeth; it will also show her serious tooth decay. She will then have better knowledge of what the children need to be taught regarding the care of their teeth, and will also be in a position to urge the parents to secure dental care for their children. It should be remembered that if decay of the teeth has progressed far enough to be seen by the glance of the teacher, that it has gone long beyond the time when the dental care of that tooth could best have been given.

INSTRUCTION ABOUT GOOD FOODS FOR THE TEETH. An important cause of tooth decay, especially in infancy and early childhood, is believed to be faulty diet. The minerals from which the teeth are built must be supplied by the food. Milk, because it contains so much calcium, is the most important single food for the teeth. Other foods furnishing material for the teeth are vegetables, fruits, whole grain breads and cereals. Candy is bad for the teeth. Teeth and gums remain in a better condition if some food that requires vigorous chew-

ing, such as toast, is eaten each day. The teeth should never be used to bite nutshells or hard candy.

TEACHING CLEANLINESS OF THE TEETH. Teaching the children how to brush their teeth is an important item in health teaching. Devices appropriate to the age of the child should be used to get him to form the habit of brushing his teeth regularly.

Teeth need brushing after every meal just as truly as the table dishes need washing after a meal. If it seems impossible to brush them that often, at least brush them before breakfast and before going to bed. The most important single time is before going to bed.

The only way that a child or anyone else learns to do a thing is by doing it, not by talking about it. Therefore, if the school is to train the child how to brush his teeth, it can be taught only by having him actually brush them. A tooth-brush drill is often useful. The correct way of brushing the teeth is best taught in the primary grades, but the lesson is appropriate for any grade where many of the children do not know how to brush their teeth correctly.

In order to have a drill the children will need to be provided with a tooth brush, a cup of fresh water, and a wash basin. Children may bring their brushes from home. It is best to use running water from the tap when brushing the teeth, but it will probably be necessary to substitute the cup and basin at school.

Remember that there are five sides to every tooth that need to be cleaned—the top, the side next to the tongue, the side next to the cheek, and the two sides next to the other teeth. For cleaning the outside of the teeth, put the brush, bristles up, flat on the upper gum as high as possible. By turning the wrist bring the bristles downward over the gums and the teeth by a vertical motion downward. Next, clean the inside of the teeth by opening the mouth and using the brush up and down so that the bristles of the brush will move in the grooves between the teeth, and not across them. Then brush back and forth over the chewing surface of each tooth.

The sides where the teeth come next to each other can be fully reached only by the use of dental floss. The teacher of little children would do well to have her own brush and show the children the motions, then work patiently and encouragingly until they have learned to brush their teeth correctly. After they have learned the motions, have them practice to count. Divide the process into the cleaning of

Outside surfaces—left side, right side, front.

Inside surfaces—upper left side, upper right side, upper front, lower left side, lower right side, lower front.

Chewing surfaces—upper left side, upper right side, lower left side, lower right side.

Count five to six for the number of motions of the brush for each of the thirteen surfaces just mentioned. When the process is well learned, the thorough brushing of the teeth should take about two minutes. Even this brushing will not thoroughly clean the teeth, for the surfaces between the teeth have not been completely reached. Next show the children how to use dental floss.

TOOTH BRUSHES AND TOOTH POWDER OR PASTE. The best tooth brush is a small one with bristles in tufts of uneven lengths. The bristles should not easily break or pull out. Tooth brushes are expensive, and for this reason many children own none, or one that is so old that it is worthless. Some tooth brush concerns will furnish teachers with brushes for school children at very much reduced rates.

The tooth brush should be kept in a clean, light place, where it can dry and air thoroughly between the times of using.

A good tooth paste or powder helps clean the teeth, but it is not necessary, for the brushing itself is the essential thing. Because tooth powder as bought in the ordinary cans is expensive, some teachers have made up a tooth powder and sold it to the children at a few cents a bottle. The following formula would be inexpensive and easy to prepare. The materials necessary to compound it may be obtained without difficulty from any druggist.

From the Metropolitan Life Insurance Company's pamphlet on the care of the teeth:

Peroxid of magnesia	60 parts
Perborate of soda	30 parts
Pulverized soap	10 parts

Mix thoroughly in a 200-mesh sieve, and flavor with wintergreen or some other flavor. (Formula of Dr. Joseph Head.)

POSTURE OF THE SCHOOL CHILD

Fine posture helps to create and to express mental and emotional health; it enables the lungs to expand easily in breathing; and it allows the digestive and other vital organs freedom to do their work. However, good posture—as such—cannot be had without some effort. Once that effort is made, it will be found that the fine, erect posture in which it results, brings comfort as well as efficiency. Courage, alertness, enterprise, and joy are shown by the way the body is carried.

DEFECTS IN POSTURE. Round shoulders, flat chest, sagging and protruding abdomen, as shown in the first two illustrations on page 378, are exceedingly common among children. Note the utterly different impression given by the same child when she stands in the position shown in the third illustration. One can almost instinctively feel that, corresponding with the difference in posture, there is a vast difference in the way the bodily and mental processes are going on. Medical study shows that this impression of differences corresponds with actual facts. Very frequently children have curvature of the spine which causes one shoulder or hip to be higher than the other. Such a condition weakens the endurance of the body. A straight stick can support a greater load than a bent one.

In walking and standing, the weight of the whole body is supported by the feet, and the normal foot is wonderfully adjusted to this task. There are muscles, tendons, and joints in the normal foot that help it to carry the body with grace



Illustrations of incorrect and correct posture

and ease. There are two arches, one across the foot and one running lengthwise, which serve as the springs do in an automobile, and save the body from disagreeable jars. Unfortunately, due largely to ill-fitting shoes and stockings which may have been worn from babyhood up, the feet of many persons have become weakened by lack of opportunity for the proper exercise or by deformity. The arches may be flattened; and as a result, the feet will ache, and soreness will probably extend up through the muscles of the leg and probably will cause backache. Corns, calluses, and blisters may cause further discomfort.

CAUSES AND REMEDY OF POSTURE DEFECTS. Poor posture, like other defects, has a cause, and the mere direction to "sit up straight" or to "stand up straight" may be worse than

useless. One of the common causes of poor posture is that the child is underweight and overtired because of lack of proper food and sufficient rest, or that some other condition keeps him from being well. Correction of malnutrition will take care of many posture defects; correction of posture defects will help to improve malnutrition due to difficulty in digesting food when the organs of digestion are not in the position to do their best work. Efforts to correct wrong posture and malnutrition should go hand in hand.

Curvature of the spine is much more common in children who have been in school several years than in children just entering school. It is believed by physicians that faulty postures are due, in part at least, to the habit of carrying books under one arm, and of writing with one arm on a desk that is so high that it lifts up the shoulder.

Observe that those of the children in your room who look comfortable in their seats have desks such that the elbows may rest upon them without causing either the round-shouldered position or lifting of the shoulders. The seat is the right height to allow the feet to rest comfortably upon the floor.

Properly fitting shoes will do much to prevent weakness of the feet. Shoes should have broad toes, straight inner lines, low broad heels, and should be comfortable. Rubbers should not be worn indoors.

Shoes with heels run down on the inside are particularly bad for the arches of the feet. Arches will be helped by the habit of walking and standing with the feet pointed straight ahead, not toeing out. If the child's feet trouble him even with corrected shoes and correct habits of walking, ask the physician, nurse, or physical education supervisor to prescribe some of the simpler corrective foot exercises. They may help greatly. There are comparatively few troubles with the feet that cannot be cured by following the suggestions given here. It may take time, but it will be worth it. A detailed outline for the examination of posture with suggestions for the correction of defects is given in Chapter VIII, page 432.

CHAPTER THREE

PREVENTING AND CONTROLLING DISEASE

A HEALTH examination at the beginning of the school year followed by a vigorous campaign to correct all the troubles discovered will do a great deal for the child, but there is another danger to his health which can be met only by daily watchfulness and proper precaution. A health examination in the fall is not enough to protect the child from the contagious diseases common to children. The greater number of illnesses, ranging from the milder ones such as colds to the most fatal types which affect school children, are due directly to contagious diseases. Many of the defects found by medical examination, such as deafness, heart disease, and poor nutrition are the results of contagious diseases and the lack of proper care during and after such diseases.

DESIRABILITY OF PREVENTING CONTAGIOUS DISEASE. Many people who are ignorant of the facts think that children *must* have measles, mumps, whooping cough, and other diseases, and that the sooner they have them, the better; in fact, they feel particularly fortunate if those illnesses may be over with and "out of the way" before the child goes to school. It is impossible to estimate the deaths and injuries that have come to little children because of this belief. The truth remains that the older a child is before being exposed by accident to a communicable disease, the less likely he is to take it; and the older he is before catching such a disease, the less serious, on the average, it is likely to be.

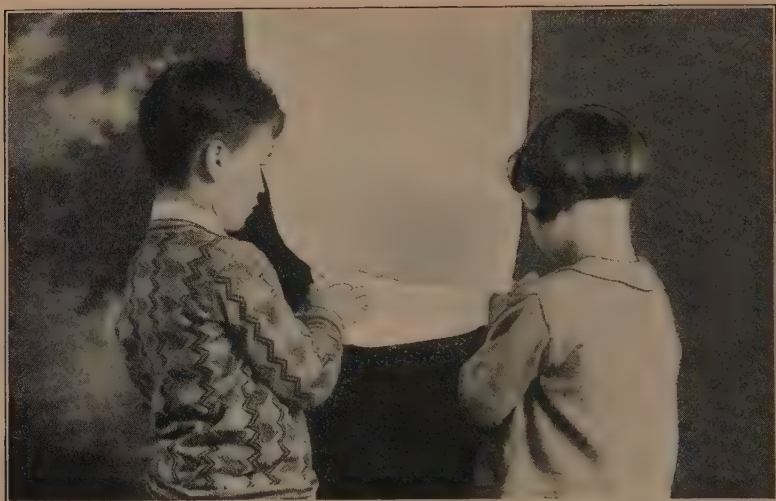
TEACHER'S PART IN CONTROL OF CONTAGIOUS DISEASE. In order to do her part in safeguarding the child from contagious disease, there are several things that the teacher may do. Some of these are suggested on the following page.

1. She may inspect all of the children every day for signs of unusual health disturbance.
2. She may understand the methods by which disease is spread.
3. She may be thoroughly acquainted with what the laws and customs by which her school system is controlled permit and expect her to do if she detects such signs of health disturbance.
4. She may understand the special methods of preventing contagious disease, and be ready to explain these to parents.
5. She may know what conditions of the school building and grounds would prevent the spread of disease and use her influence to see that these conditions are obtained.
6. She may teach the children such habits and information related to the spread of communicable diseases as are appropriate to the responsibilities the children should assume at a given age.

HOW COMMUNICABLE DISEASES ARE SPREAD

NOSE AND THROAT SECRETIONS. In most contagious diseases the material that can spread the disease is in the nose and throat. When a person with the disease coughs with mouth uncovered, laughs, shouts, or sneezes, this material may be scattered in the air to a distance of ten or twelve feet. It may then be breathed into the nose or throat of another person, and thus the disease is conveyed and caught.

Other ways by which this material from the nose and throat may be spread are by kissing, by the use of common drinking cups, towels, pencils, books, and handkerchiefs. Hands which have touched the nose or mouth, or which have been held before the mouth when coughing or sneezing, may be contaminated with this material, and may very easily leave it on door handles, books, toys, hanging straps in trolley cars, or on the hands of other children. If a child who does not



The common towel spreads eye and skin diseases. It is a menace to health have the contagious disease gets this material (while it is still moist) on his own hands, and then handles food or touches his nose or mouth, the contagion may thus be spread.

CARRIERS. Some diseases are known to be spread by "carriers," that is, by persons who do not show any recognizable signs of the disease, but who are capable of giving it to others. Typhoid fever and diphtheria are among the diseases known to be spread by carriers. This is another reason—in addition to courtesy and refinement—why children should at all times observe the habits that tend to prevent the spread of disease, not practicing them only when there is special danger of contagion.

INSECTS. Insects may spread disease. The fly is the worst offender, for he may go directly from filthy material or from the hands and face of the sick person to food, and to the hands and mouths of well people. Malaria and yellow fever are carried by mosquitoes. Fleas, bedbugs, and lice are also known to spread disease.

How infection enters the body. The infection of most diseases enters the body through the nose and mouth. There-

fore, if a person never allows anything to go to the nose and mouth but pure air, clean food eaten from clean utensils and carried by clean hands, a clean handkerchief, and a clean tooth brush, he will protect himself from most contagious diseases. Infections may also enter through breaks in the skin; therefore care should be taken in regard to the cleanliness of cuts, bruises, or other wounds.

Need for intelligence and thoughtfulness. Selfishness, thoughtlessness, and ignorance are frequent causes of the spread of disease. Persons who fail to observe quarantine, who hide cases of disease, who allow sick children to go out with well ones, or who go out among other people when they have reason to suspect that they have, or may be coming down with, a communicable disease, are either selfish or ignorant. It must be remembered that common colds, especially during the first few days, are usually very contagious.

THE DAILY HEALTH INSPECTION

THE TEACHER'S RESPONSIBILITY. The annual health examination in the fall can do nothing to check an epidemic of whooping cough, mumps, or measles several months later; nor can it determine whether or not the child has a special illness such that it would be best, for his own sake, not to allow him to remain in school. These matters can be determined only by a daily health inspection. This inspection is the key to preventing the school from becoming a disease center by detecting early the signs of health disturbance and disease. In no school system can it be assumed that the physician or nurse can come in daily contact with every child, a contact close enough to make either one responsible for such inspection. Parents, teachers, and children who are old enough to understand their responsibility to others must take charge of this daily inspection. It takes only a reasonable amount of training for the classroom teacher to do efficient work in the control of the spread of communicable disease by means of a daily health inspection.

ITEMS TO BE OBSERVED. The teacher should be trained to detect abnormal conditions concerned with:

1. Hair and scalp—lice.
2. Skin.
 - a. Face—unusual pallor or rash.
 - b. Neck—acutely swollen glands.
 - c. Hands—eruptions, such as itch or poison ivy sores.
3. Eyes.
 - a. Lids and their lining—red or running eyes.
 - b. Eyeball—redness.
4. Ears—ear discharge.
5. Nose—running nose.
6. Mouth and throat—red and inflamed throat.
7. Body—rashes, eruptions of any kind if new.
8. General observations—limping, as from recent injury previously unknown.

INSPECTION IN THE PRIMARY GRADES. If the primary teacher is a good observer, the morning inspection may be made through some device by which each child will come before the teacher in a good light, and yet remain unconscious that he is being inspected. This may be accomplished through some game or through the custom of having each child greet the teacher when he comes in the morning.

INSPECTION IN THE INTERMEDIATE GRADES. The following is a suggested technique for the inspection in the intermediate grades. It is estimated that this method requires from five to eight minutes in a school of forty or fifty.

The teacher should stand with her back to a good source of light. Each child passes before her, giving her a brief opportunity to notice all parts of the person. The child can do the following:

- a. Lift his own hair as requested by the teacher.
- b. Draw down his lower eyelids.
- c. Throw back his head so that the edges of the nostrils may be seen.
- d. Open his mouth and say “Ah” so that the throat may be examined.

- e. Show the palms and backs of his hands with the fingers spread.

INSPECTION IN THE JUNIOR HIGH SCHOOL. In the junior high school, if a proper spirit of citizenship has been developed, the pupil may take much responsibility upon himself. If he has been properly instructed, the teacher may assume that his presence in the schoolroom indicates that he believes himself to be in such health that he is able to carry on his own work and not be a menace to others. The teacher will still need to make an informal inspection, but the fuller routine of the lower grades is not necessary.

THE CHILD WHO SHOWS SIGNS OF ILL HEALTH

FOLLOW CUSTOMS OF SCHOOL IN ISOLATING CHILD. If, during the daily inspection or at other times during the day, the teacher observes any of the signs of ill health previously mentioned, she must follow procedures approved by the school officials. In all cases, if the signs are new and have not proved to be those of a non-communicable disease, the next step is to remove the child from contact with other children. According to the possibilities in the situation, the teacher may send the pupil to the school nurse or principal, or take means to notify the parents herself, or even the board of health, if this is required. The child should be separated from the other children as quickly as possible. If the school is in a one-room building, or if, for other reasons, there is no room to which the child may be sent, he should be seated as far from the other children as possible until suitable arrangements may be made for him to go home.

EXCLUSION OF CHILDREN FOR COLDS. It is true that many of the signs of ill health mentioned may indicate nothing more than a cold. However, colds are contagious, particularly in the early stages, and schools which have established the custom of excluding children for colds (which are in the stage of sneezing or running nose) have actually reduced, through the subsequent protection of other children, the number of

absences due to colds. Even where children are excluded for colds, the danger is that they stay at school just about one day too long at the beginning of the cold, when it is most contagious. Moreover, in the early stages of a cold, it may be impossible even for a physician to distinguish between a cold or sore throat and the onset of other contagious diseases, such as measles, scarlet fever, and diphtheria. Therefore, if the child is kept out of school for any of these signs of health disturbance, he will be prevented from spreading the more serious diseases as well.

THE PROBLEM OF HEAD LICE. The teachers in some communities may find an annoying problem in the presence and spread of head lice among the children. The difficulty of dealing with the situation is increased by the fact that the cure of the school child will not be permanent if other members of his home remain infested. The teacher's watchfulness must be constant:

No child who has active head lice should remain in school. Preferably there should be no nits (eggs) either. Nits are tiny pearl gray bodies attached firmly to the shafts of the hair; they can be seen with the naked eye. If children with nits are allowed to return to school, it should be known that those children are being kept under active treatment until the nits also have disappeared.

The following is a satisfactory home treatment for head lice which teachers may recommend to parents:

Saturate the hair and scalp with kerosene, leaving it in that condition for three hours. Then shampoo the head thoroughly with soap and water. Do not expose the child to a flame.

Tincture of larkspur may be used instead of kerosene. Keep the liquid out of the eyes. If the tincture of larkspur is used, cover the head with a towel for at least six hours; then shampoo the head thoroughly. After the shampoo, whether larkspur or kerosene has been used, remove the nits with a fine comb wet in vinegar. It should not require more than one or two days to free the head of both lice and nits.

QUESTIONS PARENTS MAY ASK OF TEACHERS

1. Why should children be vaccinated against smallpox?

Children should be vaccinated because it is a simple protection against one of the most contagious, deadly, and loathsome diseases, one which used to be as common as measles. Vaccination is the only means known that both protects a person from smallpox and prevents smallpox epidemics. It is only because vaccination has been so generally practiced that most people know so little about the disease, and it is hard for them to realize from what they are being protected.

2. When and how often should a child be vaccinated against smallpox?

Unless a child has been vaccinated within five years he is not protected from smallpox. He is susceptible when a baby, and should be vaccinated before he goes to school. Further vaccinations should be as recommended by the board of health or by the physician.

3. What are the Schick and Dick tests?

Not all children would take diphtheria or scarlet fever even if exposed to either disease. The Schick test shows which children can take diphtheria, and the Dick test shows which ones can take scarlet fever. The Schick and the Dick tests are then means of finding out which children need a treatment to protect them against diphtheria and scarlet fever.

4. How is protection given against diphtheria and scarlet fever?

The usual method is to inject into the arm a substance which causes the body to manufacture material which resists any infection if an exposure should occur. It may take the body as much as two weeks to manufacture enough of this substance to become protected, but the protection will last for many years, perhaps for life. Some people are so susceptible to these diseases that an ordinary treatment (dose) with immunizing material will not be enough to protect them.

Only by repeating the Schick or Dick test can we be sure that the protection is complete. If it is not complete, further treatment can make it so. The treatments for protection against scarlet fever and against diphtheria are two entirely different treatments, but the physician may think best to give them at the same time.

5. How much discomfort is involved in submitting to the Schick and Dick tests and the measures for protection against disease?

The tests do not involve any discomfort, or at most, not more than is caused by a mosquito bite. The protective measures do involve some discomfort in the arm in which the inoculation is given. This discomfort is rarely enough to prevent a person from doing his regular work, however. If care is taken not to use the arm vigorously soon after the inoculation, the discomfort will be less; for instance, pitching in a baseball game immediately after an inoculation will result in an arm that is much sorer than it would be otherwise. Usually the more severe the discomfort, the more susceptible would that person have been to that disease, and the more severe would have been his sickness if he had caught it.

6. What danger is there in the measures taken for protection against disease?

If the material is prepared in the proper way and given in the right manner, the danger of serious discomfort or illness is exceedingly slight. At present such material is very carefully prepared and is inspected by a Federal laboratory before it is sold. If a person has marked hay fever symptoms when he is near a horse, the doctor should be told this fact so that he may avoid the trouble such people might have from the horse serum contained in some of the materials used to produce protection. The danger to the child of not having the tests and inoculations (when needed) is very much greater than the discomfort or danger that could come from having the protective measures used.

7. What assurance may parents be given that the children

who have been given protective treatment against diphtheria and scarlet fever cannot contract these diseases?

One series of treatments is enough to protect the average child, but there will be some exceptions. To be absolutely sure that the child has received protection, the Schick or Dick test should be repeated after the first series of treatments. This test will usually indicate that the child has now received protection, but in the exceptional cases where it does not, a second series of treatments will be needed to complete the protection. These treatments against diphtheria and scarlet fever have not been used long enough for it to be possible to make a positive statement as to how long the protection lasts. The indications are that when once a person is immune from diphtheria, he will remain so throughout life. It has been demonstrated in communities where the protective measures are being used quite generally that diphtheria will disappear.

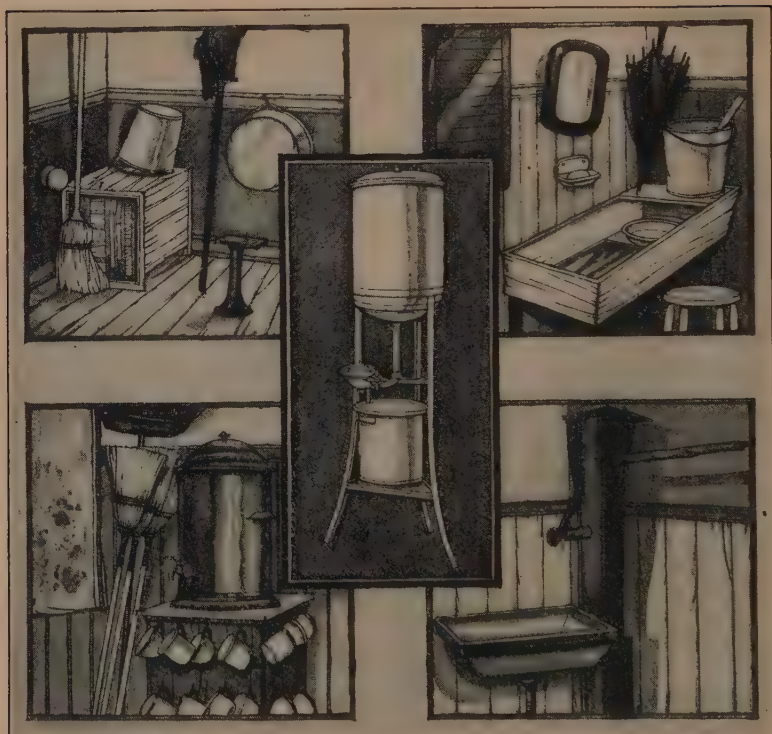
SCHOOL CONDITIONS FAVORING DISEASE CONTROL

Once the teacher understands the methods by which contagious disease is spread, she will readily think of applications to her school and grounds. The following are suggestions:

SAFE DRINKING WATER. Provision should be made for safe drinking water. If it is necessary to keep the water in the school, the tank should be kept covered, and it should be emptied and thoroughly cleaned once a week.

Common drinking cups should never be tolerated. Use paper cups or have the children make their own individual paper cups. Never permit them to use their paper cups more than once.

Where the water supply makes them possible, sanitary drinking fountains should be installed. The drinking fountain should be of some type that protects the outlet of the stream of water from contact with the mouth of the user. Those so constructed that there is a hood protecting the outlet of the stream are best and the stream should be in-



Improved sanitary drinking fountain (center) and some actual "facilities" which it should replace

clined slightly so that the water does not fall back upon the opening in the fountain from which the water flows.

OPPORTUNITY FOR WASHING HANDS. Provision must be made so that the children may wash their hands in a sanitary way. The common cake of soap, the common wash bowl, and the common towel must not be used. Running water, paper towels, and some form of liquid soap container will most easily solve the problem. In rural schools where the water has to be brought to the school from some distance, there may be difficulty in getting the amount of water necessary for children to wash their hands as frequently as desirable. Some schools have solved the problem by keeping liquid soap

in an oil can, and by using the water from the faucet of the tank of drinking water. The child may wet his hands, add a little liquid soap, rub thoroughly to loosen the dirt, and then rinse with more water. Two children should work together so that the one who is washing his hands need not handle the soap can and the water faucet with dripping fingers. Children should be taught to wash their hands before luncheon. They may form a line, and two pupils be appointed to assist—one by pouring the soap from the can, and the other by pouring the water to wash and rinse the hands.

CARE REGARDING SCHOOL LUNCHEON. The school luncheon, if there is one, should be served in a way that will prevent the spread of disease. This is necessary both for the immediate protection of the children as well as for the training that it gives them. Children who help to prepare the luncheon should wash their hands carefully. Food should be handled as little as possible. Dishes should be washed in hot soapy water. The dishcloth should be washed and boiled or hung in the sunlight.

CARE OF THE TOILETS. Toilets should be inspected every day by the teacher to be sure that they are clean. If earth closets must be used, they should be screened from flies.

CHAPTER FOUR

FIRST AID AND EMERGENCIES

ACCIDENTS will sometimes happen. The best treatment is prevention. Children should be taught *safety first* measures. The material appropriate for the different grades and the different ages is discussed in the volumes dealing with the grades in question. Yet, when everything possible is done some emergencies will occur which the teacher must be ready to meet.

In case of emergency in the school the teacher should remember that to give first aid she should be:

1. Watchful and intelligent, in knowing what to do and what not to do.
2. Calm and not hurried in any situation. This poise and self-control of the teacher is a fine influence for the informal teaching of mental hygiene.
3. Gentle and considerate. This will help to calm the pupils in the room, and will help to reassure the pupil who needs first-aid attention.

FIRST-AID MATERIALS FOR THE SCHOOL¹

Every school should be equipped with some first-aid material. The amount and kinds of material will differ somewhat according to the size of the school and according to whether or not there is a nurse in the building. In a one-room school or in a school where each teacher takes full responsibility for her pupils the following is a good practical list of first-aid materials to have on hand:

Wooden tongue depressors

Mercurochrome— $\frac{1}{2}$ -ounce bottle—2 per cent solution; or

¹The Wood-Rowell First Aid Cabinet for Schools may be obtained from the Frank S. Betz Co., Hammond, Ind.

Mercurochrome swabs

Gauze bandages—2 rolls of 1-inch width and 2 rolls of 2-inch width

Adhesive plaster—1 package of 1-inch width

Sterile gauze

Tube of burn emollient

Scissors

Small enamel wash bowl

Safety pins

Aromatic spirits of ammonia—1-ounce bottle

Tube of carbolyzed vaseline

Box of bicarbonate of soda

These should be kept in a clean box used only for this purpose.

WHAT TO DO IN EMERGENCIES

The teacher should know the immediate thing to do in the following emergencies:

Cuts and bruises

Nosebleed

Burns

Fainting

Nausea and vomiting

Fits and convulsions

Sprains

Broken bones

Foreign bodies in the eye,
ear, and nose

Ivy poisoning

CUTS AND BRUISES. The most common wounds will be slight cuts or bruises which are near the surface and in which there is not severe bleeding. The important thing is to keep the wound from becoming infected. Do not touch it with your hands even if they are washed. Paint the wound with mercurochrome from the first-aid cabinet. Take sterile gauze and put over the wound. Be careful in opening the package and in unrolling the bandage that your hand does not touch the part to be put over the wound and that it does not touch the gauze remaining in the package. Fasten the gauze either by means of a bandage or by means of strips of adhesive plaster; the choice will depend upon which is the more convenient. For example, a bandage would be best for

a finger but adhesive strips would be best to hold the gauze for a bruise on the back of the hand.

In deep cuts, such as may be made with a knife or piece of broken glass, if there is severe bleeding with bright red blood coming in spurts, do what you can to stop the bleeding and call a doctor. The bleeding that comes in spurts is from an artery and will need strong pressure between the place of bleeding and the heart in order to stop the flow of blood. Temporarily this pressure may be applied with the thumb a little way above the wound (nearer the heart). Meantime make a tourniquet of a strip of cloth; this is done by tying a piece of cloth around the arm or leg above the wound. Insert a roll of cloth under the part of the tourniquet directly above the wound. Put a pencil or stick through the knot and twist to tighten the tourniquet until bleeding is stopped. A tourniquet must be loosened as often as every twenty minutes in order that the limb may not be injured from cutting off its blood supply. Loosen for a few moments and then tighten again if the bleeding has not stopped.

If a wound is a deep puncture, as may be caused by a nail, a wire, or a toy pistol, squeeze the skin around the wound gently to produce bleeding, if possible, and paint over the wound with mercurochrome. Have a doctor see the child.

NOSBLEED. Slight nosebleed does no harm and does not require treatment. If the nosebleed is severe and continues, place the child in a chair with his head hanging backward, loosen anything tight about the neck, apply cold to the back of the neck by means of cloth wrung out of cold water, put a roll of paper under the upper lip between it and the gums. If the bleeding still continues send for a doctor at once. In the meantime pack the nostril by pushing into it with a pencil the end of a narrow bandage. Leave enough of one end of the bandage outside so that it can later be removed easily by means of this end.

BURNS. It is particularly necessary to be prepared for this emergency if you have a school lunchroom. All deep burns or slight burns covering a good deal of surface need the atten-

tion of a physician. Before the physician comes relieve the pain as much as possible by protecting the burn from the air by (1) a paste of cooking soda and boiled water or the cleanest water obtainable or by (2) sterile vaseline spread on sterile gauze. Slight burns or blister may be treated by painting with mercurochrome and then protecting with a vaseline dressing or with some of the burn emollient spread on sterile gauze.

FAINTING. Fainting is caused by a lack of blood in the brain. Therefore the treatment should be to loosen any tight clothing at the neck and to put the person in a position where the blood can easily return to the brain. If the child feels faint and is still able to sit up, press the head down to or between the knees. If necessary, put the child on the floor. It may help to grasp him under the knees and to lift the legs. See that he has plenty of air and for this reason keep a crowd away and the windows open if necessary. Do not try to get the person to drink anything until he has fully recovered consciousness.

NAUSEA AND VOMITING. With nausea, the child should lie down in as quiet and cool a place as is available. Several large drinks of lukewarm water with perhaps one-half teaspoonful of bicarbonate of soda in a glass of warm water will usually cause free vomiting and will wash out the stomach, which is very desirable.

FITS AND CONVULSIONS. In a fit the child may fall down, jerk the head, arms, and legs, roll the eyes, and foam at the mouth. Prevent the child from injuring himself but do not try to do more to hold him quiet. Put a handkerchief or a ruler between his teeth so that he cannot bite his tongue. If he afterwards becomes unconscious let him rest quietly. Any child who has fits should be under the care of a physician.

SPRAINS. Sprains are injuries to ligaments of joints. Severe sprains should be treated by a doctor. In a slight sprain such as comes from a "turning of the ankle," all that the teacher need do is to prevent the child from walking. If the pain persists for more than a few minutes, make some arrangements

so that the child need not walk home from school that day.

BROKEN BONES. It is often difficult to tell whether a bone is broken. A broken bone may be suspected if, after the person has suffered a blow or fall, he is unable to move the limb or if the bone can be seen to be bent. First send for a doctor. Next prevent any further injury by moving the bone as little as possible; the broken ends of the bone may cut through the flesh if they are moved. If the person must be moved before the doctor comes, support both sides of the break with your hands; do not let the bone bend.

FOREIGN BODIES IN THE EYE, EAR, AND NOSE. Injury to the eye causing severe pain and redness, or a cut of the eye should be treated by a doctor at once. Until the doctor comes the eyelids may be kept still by covering the eyes with a cloth soaked in cool water. For a small particle, like dust or a cinder, if the child will close his eyes the tears may wash it out. The upper lid may be drawn down over the lower lid and the nose blown vigorously several times. If neither of these methods is successful, try to remove the particle with the corner of a clean handkerchief.

If foreign bodies can be removed from the ear or nose with the fingers no harm will be done but the doctor should remove all other objects. If hairpins or other instruments are used by an untrained person in the attempt to remove the object, the result is likely to be that the object will be pushed farther in.

IVY POISONING. If you discover that a child has been handling poison ivy have him scrub his hands thoroughly at once with soap and hot water. This scrubbing may remove the poisonous material and prevent the development of a rash. If a rash has appeared see that the child does not scratch it and thus spread the trouble. Severe poisoning should be referred to a doctor for treatment.

CHAPTER FIVE

THE TEACHER'S PART IN SOCIAL HYGIENE

THE home is the most important of all institutions. It is fundamentally based on the faithful love and unselfish devotion of one man and one woman who are devoted to the members of the home and of the family. The home is the best means that society has found to solve the problems that arise, because the human world is made up of men and women and little children. Social hygiene has as its most important purpose the preservation of the family as a social unit in such a manner that it will contribute in the largest and best way to the happiness and usefulness of the individual members, and to the best development of the race.

The advancement of social hygiene is dependent fundamentally upon the inculcation of sound ideas and attitudes in children and youth.

All of what is worth while that the teacher helps the children to build into their lives they will carry into the homes where they are now children, and into the homes which in the future, as adults, they may help to establish and maintain. An education that gives the children healthy bodies, minds, and dispositions makes them the kind of persons who can take their part in good homes.

The people in the world are either men and women or boys and girls. The home and parenthood are built on this fact and most relations of human beings to one another are influenced by it. In order that children may grow up to be good citizens and good parents of the next generation it is necessary that they have wholesome attitudes and knowledge regarding sex differences and the beginnings of life. To get this right attitude, children need the help of both parents and teachers.

* As soon as children are old enough to recognize father and

mother they begin their understanding that the world is made up of men and women. The tiny child knows that brother and sister are different kinds of persons. He knows very early in his life whether he is a boy or a girl. He early recognizes that he belongs to a family and, if he is in a normal home, that father and mother have a special care for each other and for him and for his brothers and sisters.

The normal child is as wholesomely curious about why he is a boy and his sister a girl, and about where baby brother came from, as he is about the planting of the garden or the changing of the seasons or the falling out of a baby tooth. It is to be expected and desired that the child will ask questions about all these simple natural facts. If he is fortunate enough to be one of several children in a wise home he will have no furtive curiosity about matters of sex. He will accept as a matter of course the physical differences between boys and girls. His questions about the beginnings of life will have been answered with the same natural, truthful frankness with which other questions are answered. He will have explained to him what his question asked for, as well as he can understand it, and further information may wait until he needs and wishes more. He will not have had myths or falsehoods told him, such as the story that the stork brings the baby; his genuine curiosity will not have been put off by such an answer as, "You are too young to ask such questions"; and above all he will not have got the impression that there is anything bad or shameful about the topic.

It is well for the child if the simple facts of reproduction are learned in his home before he comes to school. If his curiosity has not been satisfied, it will not have disappeared, but the child will try to get the desired information in other ways. Too often it will come from a wrongly taught school-mate as a vulgar story and the child who gets information or misinformation in this way may find it difficult throughout life to think of natural facts in a clean spirit.

Unfortunately, although this early teaching belongs to the home, many parents do not know how to give it because they

do not know in what words to give the child answers to his questions; or because they are themselves embarrassed. Teachers should be ready to help the parents by talking with them and by suggesting helpful books and pamphlets.

It is not expected that the grade-school teacher will directly and in any special lesson periods teach children about the human sex factor in social hygiene, but the wise teacher can by her own attitude, and by leading the boys and girls in their attitudes toward one another, give very important help. Children should be taught to use the same standards of honesty, courtesy, and helpfulness toward members of the opposite sex as toward their own. Antagonism between the sexes should not be aroused by pitting the boys against the girls in competition. It is not wise to "call on the girls" when none of the boys can answer a question. The average grade-school child prefers companions of his own sex but very desirable friendships between boys and girls are not uncommon. By no means should the normal comradeships of boys and girls be spoiled and turned into silly affairs by any teasing about "beaux" or "sweethearts."

Through the life stories of plants and animals, as they are taken up in the Science departments, the teacher is given an opportunity to encourage wholesome attitudes and to give knowledge that can be used by the right person at the right time to make more natural and simple the story of human reproduction. A study may be made of the seed pods of plants and of the way that seeds are scattered. Children may grow seeds in the schoolroom or in their school garden. They may learn the parts of the flower and the use of each part and the need of pollen brought from another plant by the wind or by insects to make seeds grow. They may learn how man has improved plants like the corn by selection of the best seed for planting. The study of animal life will explain how the animal gets its food and cares for itself, and the care that animals give to their young and to making homes for them.

In many incidental ways children can be helped by their teacher to be thoughtful of their parents. Let the children in

school plan to do or to make things for their parents. School children may also be helped by the teacher to have a protective attitude toward smaller children.

The child whose curiosity about sex has been met in a wholesome, matter-of-fact way, who has plenty of interesting things to do, and whose body is normal and clean and comfortably dressed will not be conscious of his or her sex and will not be likely to form any undesirable sex habits. Teachers, in order that they may cooperate with parents, should understand that irritation in the genital region, due to tight clothing, lack of cleanliness, or slight physical defects has an unwholesome effect. Neglect of freeing the body from waste products should be avoided. Children should have the opportunity to go to the toilet whenever necessary and be able to do so without embarrassment. If the teacher has a definite impression that a pupil has any disturbance of sex, or an undesirable habit, the advice and help of the supervising school principal or of nurse or physician should be asked, in order that needed help may be given to the parents and the child. An examination by a physician will often be called for. In a normal child, help beyond the removal of the irritation will not be needed. If necessary, the child should be told without frightening him that the habit is undesirable and then he should be given good companionship and plenty of interesting things to do. The teacher will not attempt to deal with this problem except through cooperation with the parents.

Teachers need training in social hygiene. The National Education Association of the United States has adopted a resolution favoring the teaching of social hygiene in all normal schools and other teacher-training institutions. The teacher who has not had such a course may inform herself through carefully selected books and pamphlets.

A pamphlet called *The Teacher's Part in Social Hygiene* may be obtained, free of charge, by writing to the American Social Hygiene Association, New York City. This pamphlet contains a very carefully prepared list of references to books and pamphlets of value to teachers.

CHAPTER SIX

MENTAL HEALTH

IT IS natural for us to love the child who is bright and attractive, generous as well as joyous, but there are few of us who try to help—or even to understand—the boy or girl who is stupid and cruel, deceitful or sullen. If such an unfortunate child suffers because of his disposition, our tendency is to say, in the vernacular, “It serves him right!” We should never dream of commenting in like manner upon the blind man whose affliction caused a serious fall; yet the child who suffers from mental ill health needs as much careful attention as if he were suffering from a physical illness. He needs conditions that will make it possible for him to get well; he needs the knowledge of what he himself may do to help, and the will to do it; above all, he needs understanding. His temper is no more the result of his choice than is your toothache; and though his sullenness may cause others unhappiness, the child himself is the greatest sufferer from his ills.

The teacher who believes in her profession will have as earnest a desire to prevent the suffering caused by mental ill health as she will to prevent that which is caused by physical incapacity. She will, to the limit of her power, try to make it possible for every child to have his rightful heritage, health of mind as well as health of body. Although the cause, prevention, and cure of mental ill health are not so definitely understood as those of many physical ills, there are many well established facts with which every teacher should be acquainted.

PREVENTING MENTAL HEALTH DEFECTS

The child's early years are the most important ones for establishing good mental health for his entire life; his parents and others who are in close association with him during the

pre-school years are the most important people. The teacher's responsibility also is great, because her guidance should of necessity be more impartial than that of the parents. During the school years she may further the work of the parents by directing the growth of her pupils toward mental health, thereby insuring protection from mental disorders. Most of the unhappiness, the nervous breakdowns, the crime and insanity of adult life can be traced to their beginnings in an unhealthful habit, event, or condition of childhood. Mental disorders are becoming increasingly prevalent, and the only satisfactory way of dealing with them is by prevention. This involves the training of parents and teachers in the fundamentals of mental health.

IMPORTANCE OF THE TEACHER'S MENTAL HEALTH

The mental health of the teacher is the most important single factor in determining the mental health of the children under her guidance, and nothing is more contagious than mental ill health or good health. The teacher who is sarcastic, conceited, or domineering is a positive danger to children. Although some of the children may not be harmed by a bad-tempered or indifferent teacher, there are those who will store up resentments and hatreds which will affect them through all the years to come. What the teacher is and does has greater effect and will be remembered longer than the facts she teaches. If the teacher has vitality, sympathy, and enthusiasm—if she is happy in her relationships outside the schoolroom as well as inside—she has the most important qualifications for teaching mental health.

MENTAL HEALTH AND INTELLIGENCE

We distinguish between mental health and intelligence. Since the latter may be determined by modern tests and measurements, teachers today are avoiding mistakes for-

merly made in the judgment of a child's ability, and children no longer suffer from errors of this kind (see *Classification of Pupils*, p. 85). These intelligence tests determine the child's inborn ability to reason, to learn, and to remember. There should be great care in judging whether the child is dull and slow or very bright. The child who the teacher thinks is dull may be one whose interest and ambition are not aroused. Such was the case of a boy who seemed hopelessly dull in arithmetic. The trouble proved to be that he was a born naturalist, and arithmetic had been an intolerable bore to him. However, when he saw the relationship between the arithmetic and the building of an aquarium, he readily made good in both. Tasks should be adjusted to suit the mental ability of the child. A lesson assignment which is exactly the same for all pupils in a large class will, in all probability, be hard enough to result in the bad mental attitude of discouragement for those who are dull, and easy enough to cause lack of effort for those who are bright. Maximum and minimum requirements in an assignment may help to meet the situation of varied abilities.

CAN THE CHILD WORK HARD?

The power to tackle hard work should be growing continually in children. Strength will not increase unless there is an effort to do a little more than that which can be done easily. "Second wind" counts! Children should learn not to stop the minute they are rather tired. Life won't let them stop at the first obstacle and turn to something more interesting, and the experience in living which their school days afford should teach them to "see a thing through." This does not mean that rest periods should be neglected or that work periods should be too long. It does mean that hard work, rightly done, brings with it the joy of accomplishment. After all, there is no one, young or old, who does not feel a glow of satisfaction at seeing a difficult piece of work done well, as only he could do it.

THE CHILD AND SELF-CONTROL

Self-control is one of the most important lessons in mental health. The little baby has practically none: he cries, kicks, and eats, in so far as circumstances permit, when he feels like it. With the self-control of the adult, however, come concentration and consideration. Having determined to do a certain thing, he can carry it through in spite of distractions. He finds it possible, also, to give help and careful instruction to an awkward helper, at the same time controlling his weariness, his desire to do something else, and his temper.

Children in school should increase in their power of self-control as they approach manhood and womanhood. They must stop crying over little hurts; they must learn to be quiet when others are disturbed by their noise; they must not laugh when another's feelings would be hurt; they must not eat when it is not good for them to do so; they must keep their temper over trivial as well as important disappointments; they must work in spite of distractions. A person cannot be happy and certainly cannot be efficient in any work or in any situation if he has not learned the important lesson of self-control.

THE VALUE OF SUCCESS

Remember that everyone likes to succeed. Give the youngsters in your room some chance for success, after proper effort, that they may be happily confident of their abilities. Expect them to succeed! If a child has become discouraged through failure, give him a simple task, and for his encouragement, the tonic of praise. You will find him tackling the next piece of work with better spirit, though it be more difficult. For the children who find learning difficult, seek the field in which they can take pride in their accomplishment. If they are unable to excel in any of the studies, praise them for their orderliness or the way they helped with some task about the room. If a child is backward, the belief that he is hopelessly

dull will have the effect of a ball and chain tied to the foot of a runner. The skilled teacher of the feeble-minded knows that it is of utmost importance to be lavish in praise of successes in little things, so that the child will have more confidence and use the ability that is his. We may well learn from her that there are just as many children whose continual failures lead to indolence and stupidity as there are children in whom the latter characteristics lead to failure.

Since the giving of prizes for the best work often causes indifference among the mediocre pupils, as well as hesitancy to put forth any effort whatsoever, the practice is not to be commended. It is better to reward all who reach a certain standard or who make an earnest effort. Make the children happily confident of their ability to succeed. Refrain from assigning too difficult tasks at the very beginning. Satisfactory accomplishment of the first lessons will spur the pupil to further endeavors, and future tasks, though increasingly difficult, will be met with the will to accomplish, if in the past a reasonable degree of success has been realized.

DANGER OF FEELING OF INFERIORITY

Children who suffer a handicap are in danger of coming to feel that they are inferior to other children. One of the worst dangers of a physical deformity is that the child will become awakened to the fact that there is a difference between him and the other children, and then become sensitive and self-conscious, feeling that in *all* ways he is different. This feeling may persist for life, and may make him unhappy and inefficient. An example is given of a girl who had a deformed foot, which resulted in awkwardness. Because she was sensitive she did not join in the social activities of the other children; consequently, as time went on, she was left alone to a certain extent. She came to believe that she could not meet other people on equal terms, and her whole life was limited, not so much by her deformity as by her feeling of inferiority because of it. Failure in studies, constant repetition of the same

grade, poverty, race, even continual nagging at home, are among the causes of these hampering feelings of inferiority.

“LAZY” CHILDREN

“Oh, he’s just naturally lazy!” is often the verdict upon a child’s tendencies by teachers, parents, and friends. The fact remains that no child is naturally lazy. On the contrary, normal children are energetic, enthusiastic, and full of ambition. “But Bob will not do one bit more than he is made to do; I have to keep after him every second!” someone will say. Many children carelessly rated as lazy are suffering from any one of a number of conditions—malnutrition, diseased teeth, tuberculosis, hookworm, or from overwork at home. Again, the child may have none of these ailments and be disinclined to work in school, though he may put in a great deal of real effort at playing a game. The trouble is that the school work does not seem important or even interesting to him. This may not be the teacher’s fault, for it may be impossible to interest some children in the material that the course of study requires. However, the teacher may be invaluable in helping to discover the child’s real interests, and by giving him a chance to work in those fields after he has covered the minimum requirements in the course of study.

What the child does he is learning to do! If he sits in school several hours each day, doing his work half-heartedly and evading all that he can, the habit of working with only a part of his power is being fixed. In scientific terms the psychologists say that mental health consists in having an “integrated personality,” by which they mean the ability to turn all the powers of the body and mind to the chosen task. They say further that the person who cannot do this is a “split personality,” and that to the extent that he lacks integration of his powers, he is unable to be the most that it is possible for him to be. It is highly important, therefore, that some way be found by which all the powers of the child, all his energies, be aroused, at least in some part of his school work.

ARE THE CHILDREN LEARNING TO ENJOY?

No person can have mental health if his work is all drudgery, or if his leisure hours are filled with activities that offer no satisfaction. Work must have a purpose strong enough to carry it through all the monotony and struggle that are so frequently necessary to successful accomplishment. Adults realize this for themselves, but they forget that it is equally true for their children. We have to have a reason for the work we do, even if it be only to earn money to get things we want. There are times when this purpose alone will not make work tolerable. A psychologist hired a man at a good wage to hit a log with the back of an axe. The man gave up the job after a very few hours because he couldn't stand it to chop and not see the chips fly. Teachers might do well to stop and think whether or not the work they are assigning is—from the child's point of view—as purposeless as hitting a log with the back of an axe. If so, the child will have little enjoyment or interest in the work at hand.

It is true that there are some children who need to be forced, for a time, lest they never realize their own powers. A child who does not enjoy learning to read should not be allowed to omit the process; but the teacher, though she may have to use compulsion at the beginning—until the child is interested in the process itself—should use as little of it as is possible. The teacher who consistently gets her work done by the sheer force of authority is causing her pupils to fear not to do their work, and is therein creating a very bad mental attitude and habit (see *Principles and Characteristics of Good Teaching*, p. 243).

The children may at times be correct in their judgment that some of the work they are asked to do is useless. Why should picking out clauses in the subjunctive mode be required of the boy who is staying in school merely to fulfill the legal age requirement before he goes to work in the mill? In such a case the teacher should help the boy to the best adjustment possible under the circumstances. She should

then use her influence against having subject-matter required which is useless so far as the child is concerned.

The pupil needs to have not only a purpose that will carry him through arduous work to success, but also the ability to do things for the sake of the joy of doing them. Many an adult's break in mental health might have been prevented if that person had learned to enjoy play thoroughly, as a child, and had kept the capacity to be refreshed by it. Teach the child games; he will learn much from them. Look out for the mental health of the child who spends after-school playtime in doing work for school credit. He in particular needs the safeguard of play and recreation. Music, literature, art, and nature should be so taught that the child will be learning those things as sources of present as well as of future enjoyment.

ARE CHILDREN HONESTLY FACING FACTS?

By facing facts we mean—is the child being honest with himself, rather than—is he telling lies? Is the child forming the habit of making excuses for himself which he really believes, because he doesn't want to face the necessity of doing something? Bobbie may become very indignant if anyone presumes to ask him to go on an errand "on such an awful hot day," but on another day just as hot, he may be quite disdainful of advice that it is too hot to play ball. A boy who did not want to make the box he was asked to make said that he couldn't because the board was so full of knots. Many a girl has really believed herself too tired to wash the dishes, yet has had plenty of energy to dance for several hours. The danger is that the person who forms this habit of dishonesty with himself may find it so effective in avoiding disagreeable tasks that it will soon be difficult to convince him that he is being dishonest. Such children, if the tendency is not corrected, will grow up to be the kind of persons who "enjoy poor health," because it brings them more attention, and excuses them from the work they dislike. They will always be in

difficulty with others because they tend to blame others for faults which are really their own.

Children may avoid facing facts by escaping to day dreaming. They may excuse poor work with a description of the wonderful things they would have done if something had been different. The remedy for the listlessly day-dreaming child is not to reprove him for the dreaming, but to get him interested in some actual work and play.

IS THE CHILD BECOMING SELF-RELIANT?

Children need to be allowed or persuaded to take responsibility upon themselves as soon and as rapidly as they are developed enough to assume such responsibility. They will make mistakes but they should have a right to learn from mistakes that are not too serious. Parents who are domineering often have children who, having been allowed to have no life of their own, are incapable of making decisions; if these children do make decisions, they usually change their minds at every circumstance. Coddling and too much protection by nurses or over-solicitous mothers also tend to make children weak and dependent. It is hard not to pity these children who look to the teacher or playmates in every difficulty and who seem to have no independence. A wise teacher is needed for such children that they may be taught gradually to depend upon themselves. Games wherein the children are forced to make quick decisions and to act upon them frequently prove to be of help.

ARE THE CHILDREN FREE FROM FEAR?

There are few things more terrible than fear. Very often extreme fear in an accident prevents people from doing or even thinking anything that will help the situation. They say afterward that they were "petrified" or "paralyzed" by fear. Fear hinders both the mind and the body, preventing them from doing their proper work. Children must be guarded

from single terrific frights; but fears that remain for weeks and years most concern the teacher because they cause continued worry and nervous strain. We come in daily contact with children who are afraid of the dark, afraid of thunderstorms, afraid of being laughed at, afraid to recite, afraid of failure in examination, afraid of older children, afraid of the teacher, afraid of their parents, and of any number of things. These children are not happy, nor are they doing their best, because they are really suffering. A teacher may lower her efficiency by being afraid of losing her job or by being afraid of the principal.

Fears injure physical health, and in many cases they are the direct cause of malnutrition. For an experiment, a cat was fed a meal and so placed before the X-ray apparatus that the motions of the muscular coats of the stomach and intestines could be observed. The processes were as they should be in a contented, well-fed cat. Then a dog was brought into the room. The muscles of the digestive tract stopped their action, nor did they come back to their regular motion for some hours, proving the effect of fear upon the processes.

The healthful schoolroom will have an atmosphere of confidence—confidence in one's self, confidence in other pupils, and confidence in the teacher.

ARE THERE CRUEL, SUSPICIOUS, AND MALICIOUS CHILDREN?

Children are naturally trustful; they want to do the things that will make them well liked. Those children who are revengeful, sullen, cruel, and deliberately malicious have suffered some hurt themselves and are very, very low in their mental health. Perhaps, at present, no one knows enough to cure all of them, but a sincere attempt should be made to help them in every possible way. One of the most hopeless phases of their trouble is that although trust and friendly understanding are the attitudes which would help them most, their very dispositions are such that they receive only sus-

picion and aversion, which forces them even farther back into their sickness of disposition.

The teacher may need to protect others from such children, but if punishment is given in the spirit of retaliation, it will help no one. The most important way to help is by winning the child's confidence, and by understanding his out-of-door life. Remember that these children do not themselves understand their dispositions, and are suffering even more than they are causing others to suffer.

IS THE CHILD LEARNING TO LIVE HAPPILY WITH OTHERS?

Learning to live happily with others is one of the chief aims in life; the child will not be mentally healthy if he is not able to do so. Children should learn to lead and to follow, to cooperate in working with others, to stand up under criticism, to show courtesy, to compete in a friendly rivalry, to be good losers as well as good winners, and to join wholeheartedly and without self-consciousness in living with others. It is the school that should give every child, particularly those who come from isolated homes in rural communities, training in this ability to live with others.

The teacher should watch for the children who are unable to join easily in the group, but who excel in faithful preparation of lessons, trying therewith to make the teacher's praises compensate for unpopularity with other children. No one really loves a bookworm, nor do teachers always understand how much harm is done to a child's social nature by allowing him to become still more unpopular with other children because he or she is working hard to become "teacher's pet."

THE NERVOUS CHILD

There is no particular disease known as nervousness, and yet in every schoolroom we find one or two children of whom the parents or teacher will say, "He is such a nervous child."

Such children get tired very easily; they become excited over comparatively nothing; they talk and laugh loudly; they jump at every little noise; they just can't sit still; the most trivial things make them irritable or angry; they are crushed under reproof; and they are often timid and oversensitive. There are many causes for such nervousness. All the factors in mental health which we have already mentioned play a part. The only way in which children of this type may be helped is by understanding the cause of their action, then removing it. A careful physical examination may show that the child is suffering from eyestrain, that he is underweight, or has decayed teeth. The cause of the nervousness may be in the home; members of the child's family may be "high strung," the type that keep the child continually disturbed.

There are times when the child may be worried over something that could be settled easily if he might talk with someone in whom he had absolute confidence. This fear or worry may be absolutely groundless, or there may be a way of satisfactorily meeting the situation that the child had been worrying about in secret. Misunderstandings which lead to worry often come from a lack of frankness in matters such as sex. The nervous child should be helped to live as healthful a life as is possible, with plenty of sleep, rest, and good food; he should never be forced in school work, and he should be associated with someone who understands his difficulties and in whom he has confidence.

PARENTS' AND CHILDREN'S APPRECIATION OF MENTAL HEALTH GOALS

It is important that the teacher keep before the children's minds the fact that the goal of the school is much more than the passing of academic subjects required for promotion. The fact that the report cards often include only one mark for deportment, but grades for each individual study, tends to make both parents and children undervalue the other aims of the school. Some schools include on their cards such items as

orderliness, obedience, honesty, good sportsmanship, cooperation, promptness, and consideration, thereby emphasizing the varied aims of the school life.

SUMMARY

An intelligent teacher will help her pupils by sound example and skilled guidance to acquire healthy habits and attitudes in mental control. Such a teacher will do her best:

1. To understand her pupils individually and to help them overcome their limitations.
2. To be sympathetic, enthusiastic, and happy in her relations in school and elsewhere.
3. To be at all times not only reasonable but intelligently constructive in dealing with pupils.
4. To instill in her pupils the worth of achievement.
5. To find some way by which all the child's powers and energies will be aroused in some part of his school work.
6. To aid her pupils in the art of living happily together.

Such a teacher will help pupils:

1. To acquire self-control.
2. To escape the feeling of inferiority.
3. To give each child a chance to succeed at something.
4. To meet their problems with decision and action instead of with continued day dreaming.
5. To have a purpose in their work.
6. To find a real solution for each problem that faces them.
7. To establish habits of intellectual honesty.
8. To avoid being frightened.

CHAPTER SEVEN

TEACHING CHILDREN HEALTH

AN INCREASING number of the leading educational authorities in the United States consider health the primary concern of the school.

The child who is properly educated must learn health as well as other subjects in the course of study. In fact, each day a larger number of teachers are coming to understand that health is the most important subject for the child to learn.

The young animal in nature knows or learns by instinct how to do the things which are necessary for life and health. The creature then, when hungry, hunts and obtains food if possible; when thirsty, finds water to satisfy his thirst.

The instincts of children under conditions of modern life are not dependable guides to conduct. In many instances desirable habits must be substituted for instinctive behavior. The child, if at liberty in a well-furnished pantry, certainly needs desirable habits of health control to guide his action. Surely the child who has already acquired the physical, mental, and moral habits which would lead him to select food wisely, to know when he had enough, and to consider the rights of others is better prepared to meet such an emergency than is the child guided solely by instinct.

The child in civilization has to learn health as definitely as any other subject which concerns him if he is to take the proper care of himself as he gradually assumes individual responsibility, and responsibility for others about him.

THE AIMS OF HEALTH TEACHING

The test of successful health teaching is whether the child, out of motives that have their appeal to something in himself, has established good physical and mental habits. Our habits

are largely determined by our attitudes. For example, most people are more influenced in the habit of eating or refusing spinach by their like or dislike of spinach than by a knowledge of how much iron and how many vitamins it contains. Knowledge may be acquired in such a manner as to influence our likes and dislikes. The knowledge of the value of spinach may make us like it better.

In an authoritative report¹ made by a number of carefully chosen experts in health, the aims of health education have been summed up in this way:

1. To instruct children and youth so that they may conserve and improve their own health.

2. To establish in them the habits and principles of living which throughout their school life and in later years will assure that abundant vigor and vitality which provide the basis for the greatest possible happiness and service in personal, family, and community life.

3. To influence parents and other adults, through the health education program for children, to establish better habits and attitudes, so that the school may become an effective agency for the promotion of the social aspects of education in the family and community as well as in the school itself.

4. To improve the individual and community life of the future; to insure a better second generation, and a still better third generation; a healthier and fitter nation and race.

Health education in the past consisted largely of lessons learned from books on physiology and hygiene, with recitations two or three times a week. It was believed by the educators that if the children were given the knowledge regarding the laws of health and life, and an understanding of the reasons for the obedience to these laws, the pupils in the schools would form the habits and acquire the desirable attitudes necessary for practical, healthful conduct.

Today it is very clearly recognized that nowhere, perhaps,

¹ *Health Education, A Program for Public Schools and Teacher Training Institutions*—Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.

so much as in the field of health education, including also moral education, is knowledge so little apt to carry over spontaneously into desirable types of conduct and habits. The present-day methods of health education put primary emphasis upon habits, with the attempt to use in the various grades in the school influences and motives which will develop favorable attitudes leading the children to the practice of health habits, and also with the plan in mind of gradually helping the pupils to gain the knowledge necessary to provide the reasons for the practice of the desirable health activities.

It is today very generally recognized and accepted by our leading educators that thoughtful provision should be made for health education each year, each month, each week, and each day of the life of the child in school. It is also apparent to those who try as fully as possible to understand children that healthy children are not interested in health as such, particularly in their own health. They are somewhat interested in health as a means by which they may attain and achieve other goals in which they are naturally very much interested.

WHEN HEALTH SHOULD BE TAUGHT

While health teaching should be given a definite place and recognition in the course of study in the school program, it is increasingly apparent that health cannot be successfully taught in two or three periods assigned to this subject during the week. If such periods are devoted to health instruction, this time should be given to the discussion and emphasis upon ideas and applications in the field of health which have been brought to the interest and attention of children at other times during the day and week.

Instruction in relation to health should be given at any and every time in the program of the school day where opportunity arises for the practical application of some idea or principle regarding health. If provision is to be made, then, in this direct, informal way, so that the children will really

learn health through practical activities and experiences in life, and through their interest in and responsibility for these activities, it is apparent that *every* teacher in the school must be a health teacher.

THE TEACHER'S INFLUENCE

It is also increasingly apparent to careful students in this field that the most important influence in the school for the successful education of children with reference to health will be the personal example and influence of the teacher herself. Unless the teacher believes that health is important in the program of the school; unless she is willing to practice the requisite health habits herself and to cultivate the desirable attitudes necessary to physical, mental, and moral health; and further, unless she is capable and desirous of acquiring as much practical scientific knowledge as she can get of health instruction, the great fundamental requisite for this important part of the school program will be lacking.

COOPERATION OF HOME AND COMMUNITY

Again, no matter how thoughtful and serious may be the effort of the school to help the pupils acquire the desirable forms of conduct, standards, and ideals, and the knowledge relating to health appropriate for them, unless there is practical cooperation by the home, by the parents, and by the community in general for this program of health education, the efforts of the school will be partly, or very largely, unsuccessful or wasted.

In no part of the school program, then, is the attempt of school officials and teachers to gain the cooperation of the parents more important than in the field of health education. The programs of parent-teacher associations which provide for the practical discussions and consideration of the cooperation of the home and school for the health education of the pupils are of the greatest importance. The parent-teacher's

committee of one school has prepared, for example, a very significant bulletin giving advice to parents with reference to the health care of the children in the home, so that they may be best prepared for their work in the school.

THE SCOPE OF HEALTH EDUCATION

It should be remembered that health education according to the ideas not only of specialists in this field but also of leading educators is much broader than the program which aims at physical health and well-being. The general scope of health education is thus presented in one important report¹ in this field:

Health education can be promoted only by emphasizing all aspects of health: physical, mental, social, moral. The teacher of health should look for normal development of the child from all of these points of view. The ideal of health is not mere freedom from obvious deformities and pathological symptoms; it is the realization of the highest physical, mental, and spiritual possibilities of the individual.

According to this same report, health has to do with, first, the healthy organism, physiological health; and some of the signs or characteristics of the healthy child who has been successfully educated with reference to his own health, and the health of others, are as follows:

1. The healthy child is largely unconscious of his body. He has a general sense of well-being; a feeling of muscular power and of pleasure in movement. He is not conscious of the vital organs. When a child is in pain or in ill health, on the other hand, he becomes conscious of the parts of his body which, so far as he knew before, might have been not existing.

2. He possesses sufficient vigor so that a fair amount of work and play is more stimulating than fatiguing.

3. His appetite is steady, wholesome, and not capricious.

4. His weight does not vary widely from the standard weight for his age and height.

¹See footnote, p. 415.

5. He sleeps well, and during the normal and regular hours of sleep he recovers satisfactorily from fatigue.

6. He is able to adapt himself in new conditions of environment, climate, or modes of life without undue physiologic disturbances.

Second, health has to do with the healthy personality: mental, emotional, moral, and social health. To picture the healthy emotional, moral, and social qualities of the child is to describe the healthy personality. In describing the characteristics of the healthy personality, it is desirable to allow for a variety and range of individual differences. To be well balanced it is not necessary to suppress one's individual qualities or to conform to a pattern. The evidences of a healthy personality are enumerated somewhat in detail in Chapter VI.

CONCLUSION. This general discussion of health education is intended to present to teachers the scope and purpose of this phase of the educational program as related to children of different ages and in the different grades of the school. Sections in other volumes of *THE CLASSROOM TEACHER* will take up in detail the subject-matter, the methods, the various procedures which are now being used successfully in many progressive schools in the program of health education, and which will furnish suggestions from which teachers are encouraged to select and adapt material to meet the needs of their own schools.

NOTE: Teachers are referred for an authoritative discussion of the principles of health education to *Health Education*, Report of the Joint Committee on Health Problems in Education. Address, National Education Association, Washington, D. C.

CHAPTER EIGHT

THE PHYSICAL EDUCATION PROGRAM

PHYSICAL education, or physical training, is the part of the education of the child which comes through the big muscle activities, or rather the big brain-muscle activities. The brain centers and the nerves are always as definitely involved in play, games, and athletics as are the muscles. For this reason the term *big brain-muscle activities* is used here. Physical education, as a term, is not applied to the smaller activities of the head, the fingers, and the hands, although very frequently the muscular action of the voice in speaking, the facial expression, and the movements of the hands in grasping and in other movements are definitely involved.

WHAT PHYSICAL EDUCATION INCLUDES

Physical education includes play, games, rhythmic activities, folk dances, athletics, swimming, hiking, camping, and scouting. Physical education also should be considered to include practical work and industrial action involving the big muscles and nerves of the body, if these activities are healthful and educative to the child. Physical education, then, should include gardening, housekeeping, and the help which the child at different ages can give, with a reasonable use of time and energy, to the work on the farm, in the yard, in the house, through practical chores or other useful activities of social service. Physical education, however, as here defined and advocated provides no place for, nor justification of, any form of child labor which sacrifices in the slightest degree the health and growth of the child, or the fullest desirable education of the physical, mental, social, and moral qualities of the child, to any necessity or desire for the economic exploitation of childhood.

VALUE OF PLAY TO CHILDREN

The common conception of physical education activities is that they develop strong muscles, but the clear thinker will realize that the end results of this program are of far-reaching significance in their effects upon the mental, moral, and social life of man as well as upon his physical well-being.

Although there have existed many shining exceptions to the rule, it is pretty generally understood that a mind works to better advantage in a healthy body and that the thinking is clearer when not handicapped by deficient health. Worth-while muscular activity presents many mental problems to be solved by the student through original thinking, mental consideration, and initiative. Activity should establish a harmonious relationship between mind and body. The mental development is built upon physical soundness, and muscular activity is essential to the growth of the mind.

Many people have not considered and do not yet consider physical education as very much worth while because it looks for the most part like play, often like fooling, and many of the actions seem to be lacking in serious, practical, or useful purposes. Teachers, however, should clearly realize that play as an activity of the big muscles and the nerve centers which control them is the main business of the child, as it is of the young of animals, such as the puppy and the kitten. It is of great importance that every child should learn to play and to enjoy play. He should learn and know a considerable variety of games. He should play vigorously—as vigorously as his health and constitution will permit. He should play fairly. As he grows older, he should learn to play the game as a member of a group, and through this acquire the attitudes, the skills, and the judgments of true sportsmanship.

In physical education, the simpler individual play of the little child gradually develops, as he grows older, into more complex, more strenuous, more difficult plays; into plays which require greater skill and more cooperation and team play, and which expand in the number and variety of ele-

ments involved just as other interests and activities of the child develop and enlarge.

MUCH TIME NEEDED FOR PHYSICAL EDUCATION

It is recognized by some of our best authorities in the field of child life and education that children of kindergarten age and in the first two grades should spend four or five hours a day in big muscle activity, and children in the intermediate grades, three hours. Most of this would desirably take the form of play, while always it is better for the child that a reasonable, perhaps small, part of it should be expressed in the help which the child gives through the big activities at home, at school, in the practical and useful chores or the equivalent of chores.

It is absolutely necessary, however, that if the child's big activities are to be really helpful and educative to him, they should enlist his genuine interest; he should enjoy doing them, and they should then result in real types of satisfaction of the body, of the mind, of the feelings and spirit of the child.

It must always be remembered that education is not solely a matter of learning but rather an effort to develop a personality possessing all of the desirable qualities of character. The activities of the physical education program offer many opportunities to establish desirable traits of character, but it must not be forgotten that these desirable traits are not in the activities themselves but that they result from the activities, under the direction of a forceful and moral leader. It has been truthfully said that physical education activities may develop criminal traits as readily as traits of worthy character. The leader or supervisor of the activities holds the balance in her hand.

Something of the play attitude and spirit should accompany the individual through childhood, youth, and into and through adult life; and if the child has learned to play, with sufficient time given to that while he is in the school, he may

acquire certain attitudes and habits which will be of great value to him throughout his lifetime.

FORMING LEISURE-TIME HABITS

To be able to guide one's life into worthy channels is one of the greatest aims of education. Scientific and industrial progress has given a greater amount of leisure time and has thus presented one of the most significant and important problems to education. It has been stated that 80 per cent of the people resort to activity of one kind or another during their leisure hours and this opens a golden opportunity as well as presents a great responsibility to the program of physical education. It is human nature to want to do the things we can do, and bearing this in mind the teacher of physical education activities should make every effort to develop a skill in wholesome activities and a love of them so that pupils will turn to them during their leisure hours. The activities must be interesting and pleasurable to the children. "To miss the joy is to miss all," according to a great leader in elementary education.

PHYSIOLOGICAL BENEFITS

The various activities of physical education are popularly called muscular exercises. These activities in play, games, athletics, rhythmic movements, swimming, hiking, camping, etc., are absolutely necessary to the proper physical growth and development of the child. They are necessary to the healthful actions of the organs and tissues of the entire body. If, then, education of the child includes a sufficient amount of physical education, the following beneficial physiological results will occur:

1. Natural growth is stimulated, and the child will be more apt to grow and to weigh as much as he ought to.
2. The demand for oxygen is increased, and there is a resulting increased respiratory activity with far-reaching bene-

fits to the body as a whole. It is now believed that deep breathing without vigorous bodily exercise will not have the same beneficial results. Therefore, except in cases where medical or corrective exercises are needed, the boy and girl in school should have muscular activity sufficient to develop and exercise the lungs as much as may be needed for health, for general growth, and for the development of the thorax.

3. Digestion is improved, and the assimilation of the food is greatly benefited by vigorous and sufficient exercise. Digestion is not only a chemical but a muscular process, and healthy digestion depends very much upon the vigorous muscles in the walls of the alimentary canal. These muscular movements of digestion and elimination are much more vigorous when sufficient exercise is taken. Therefore, vigorous muscular exercise is essential to keep the muscles of the entire body in good condition.

4. Exercise also improves elimination of waste from the body, particularly from the large intestine.

5. The heart is strengthened by exercise of the big voluntary muscles in the body. The best known way in which some types of weak hearts may be made strong is by gradual and increasing amounts of physical work of the big body muscles.

6. Developing and keeping strong the muscles of the trunk, and the large muscles of the hips and shoulders particularly, by an adequate program of physical education is helpful in the maintenance of upright posture, and for the best position and functioning of the vital organs of the body.

7. Physical education exercises are also necessary to the growth and development of the brain and of the mind. Some of the most important qualities in desirable physical, mental, emotional, and social results come about particularly through group and team games wisely conducted.

It must always be remembered that if the desired physiologic benefits are to be derived from the activities they must be of such kind and performed under such conditions as will produce the above results.

VALUE OF GROUP GAMES

As the child grows older, he takes more interest in the activities of the group and, at this time, the team games should be introduced into the program. It is during the intermediate grades and junior high school that the gang instinct is most powerful. The gang must be recognized without the use of the word "gang" in hearing of the boys and girls, but the instructor must attempt to guide its activities into desirable channels. The activities gradually increase in their degree of specialization and those in the program of the junior high school should be of a more highly organized type. Progression in activities is illustrated in the graded programs presented in other volumes.

Scientific authorities¹ believe that the following very valuable qualities and traits are dependent in an important part (although not exclusively, perhaps) upon physical education:

1. Social benefits—cooperation, courage, sportsmanship, leadership, loyalty.
2. Physical or physiological powers—muscular control, strength, vigor, and endurance.
3. Mental acquirements—initiative, originality, resourcefulness, ability to form quick and accurate judgment, ability to respond to command.
4. Emotional gains—enthusiasm, control of excitement, control of temper.

Many people make the mistake of thinking that physical education means education of the big muscles of the body. This is a mistake. Muscles can be trained; only the mind can be educated. Physical education, if planned and carried out with a rational and satisfactory program of activities, then, may make vital contributions not only to the physical, but even more to the mental, social, and the moral developments of the child. The well-conducted playground or athletic field is considered by many leading educators today to be the

¹See footnote, p. 415.

most important of all the laboratories for the development of morals and character.

PLACE OF CORRECTIVE ACTIVITIES

While it is true that the program of physical education should be "preventive" in purpose, it is also true that one phase of it is necessarily devoted to the "correction" of anatomical defects and functional disorders. The program of physical activities should never seek for corrective effects in the general class activities, but should, instead, provide personal training for pupils who need corrective exercises for the cure of individual defects. Corrective exercises should be administered individually or in very small groups. Such exercises should not be attempted without the supervision of a specially trained teacher or supervisor. While the above statement distinctly limits the efforts of the classroom teacher, she has many opportunities to be of benefit in eliminating undesirable school conditions which may cause, or tend to cause, unhealthy results. Further discussion and detailed suggestions regarding remedial activities are presented in the departments on Health Teaching in the various grades. Although the classroom teacher will find it impossible to treat all cases, she should do what she can for the less severe ones, and refer the more serious cases to the care of a physician.

As little emphasis as possible should be placed on the fact that the pupil is "unfit," since the desired improvement will never be obtained by centering the thoughts of the pupil on his defects. The child even if handicapped in some way should be enrolled in the regular activity classes to the extent of his physical ability.

Constant nagging on the part of the teacher will have only a negative effect on the improvement of the pupil. Each case of deviation from normal health presents an individual problem that necessitates much sympathetic understanding and tactful skill.

TRAINING NEEDED BY EVERY TEACHER

It is essential, then, that the teachers in the public schools should have a real understanding of the scope, the purpose, the desired objectives of the physical education program. It is essential that every adequately trained teacher should have received the benefit of a sensible physical education during her or his own education, general and professional, in preparation for teaching. It is also important that every teacher, in at least the primary and intermediate grades, should have enough knowledge of physical education activities, enough interest and skill, to teach them in the school yard and, if necessary, in the schoolroom.

It is further important that the well-trained teacher should understand the educational values of play, of the simpler games of childhood, and of the more highly organized group games which come later as children get older.

A NATURAL PROGRAM OF PHYSICAL EDUCATION

The whole modern movement in physical education in progressive schools, as well as in general education, is away from the formal mechanical teaching of the past to a natural, socially motivated, interesting, democratic type of activity on the part of the children, and of teaching and supervision by the teachers.

The tendency in physical education, over the country as a whole, is then definitely away from the use of the old formal gymnastics which belong with formal discipline, and it is toward a program of natural activities which it is believed by many of the leaders in the field of physical education will more surely result in the acquiring by pupils of all of the desirable qualities which may be directly or indirectly brought about by physical education, including self-control, sound discipline, social order, and all of the attitudes and activities of a good citizen.

It is important that up-to-date teachers should fully appreciate that in physical education, as in other phases of education, it is recognized today that children must be interested in what they are doing or studying if they are to gain the greatest benefit from such activities and experiences. It is, however, important to remember that they are not to be permitted to do everything in which they may happen to be interested. Some of the deepest interests and best satisfactions that children will ever experience will come through the doing of rather difficult tasks which at first do not seem pleasurable to them, but which, if they work successfully at such tasks, will bring them more satisfaction than the simpler tasks to which they have been more impulsively inclined formerly. This is as true in physical education as in teaching the child through any other subject or type of activity.

WHAT SUPERVISION INVOLVES

Teachers, then, should be as wise as possible in the manner in which they direct and supervise the physical education activities. They should allow their pupils to develop as much self-direction and cooperation as they are able, without too rigid control, and with the help of tactful, wise suggestions.

It is the task of the teacher, in instruction or supervision given in physical education activities, to see to it that the children are not only discovering their best selves through the activities which they determine as far as possible for themselves, but that they are progressing in such a way as to provide each day, and each week, a better basis of growth, for development, for experience, for activity, and for true education at each later period.

CLASSIFICATION OF PUPILS FOR ACTIVITIES

At the beginning of the school year the children should be classified according to their ability to participate in physical activities. The first step necessary in doing this is to find out

the health condition of the child. It is very essential that the teacher herself, who directs the daily activities, shall be familiar with the health condition of each child in her charge.

One of the errors in the ordinary routine health examinations of school children is that no one knows the results of these examinations except the doctor, who perhaps is not connected with the school in any other way, and the nurse, who has little to do with the activities of the children. The regular teacher needs to know what constitutes a healthy condition of the children with whom she is working. This may be accomplished in various ways.

First, she may be present when the doctor or nurse gives the health examination, listen to comments and recommendations for each child. The impracticability of this is that the school year is perhaps over or half over before every child has been examined. The teacher has not known the needs of her pupils in time to fit the activities to the needs.

A second plan is for the teacher to inspect the records of the health examinations given the previous year and continue those recommendations until the next examination is given.

A third method is one which should establish a consciousness between teacher and pupil of interest in child health. There are certain tests of bodily conditions that can be applied by the room teacher. They are of a mechanical nature, are measurable, and are simple to give. They offer a means of recognizing the most obvious bodily conditions and consequently would serve as a basis for separating the physically normal from those who need a less strenuous type of activity. They offer a means of determining which children should have a thorough physical examination immediately before engaging in the regular physical activities. Following is a list of these conditions which the room teacher should know how to test:

Nutrition, determined by height, weight, age standards.

Pulse rate return to normal after exercise. This return to normal should occur in three or four minutes.

Chest expansion, determined by measuring the chest at full inspiration and at full expiration and subtracting to get the number of inches expanded.

Freedom from nasal obstruction, determined by having the child breathe slowly through each nostril one at a time while holding the other one closed.

Teeth clean, free from cavities, and examined by a dentist within six months.

Eyesight, tested with Snellen test type (see Chap. II).

Hearing, tested with the whisper test.

Posture, sitting, standing, and walking, each pupil to be classified for posture as good, fair, or poor.

The child's health score resulting from these tests will be a practical basis for the selection of healthful physical activities.

The classroom teacher, then, by using as well as circumstances permit the tests just explained, will be able to classify her pupils in an informal way, and bring about adaptation of activities for the advantage and protection of individual pupils. She will also by the aid of such tests be better able to refer to physicians the pupils who seem to be in need of medical help.

Within a group the children will probably fall into the following classification:

1. All will perhaps show some physical defects, some very slight.

2. A very small percentage will, because of recent illness, operation, or serious defect, such as heart lesions or other important organic weakness, or very poor nutrition, need to be given careful consideration in selecting activities. It is essential that the teacher know the condition of each child in this group. One child may need to be permanently barred from strenuous games, another may need a gradual increase of activity to build up strength of muscles or organs. It would be unjust to put all these pupils in a "deficient group" without knowing their individual requirements.

Most of the group will show posture or foot defects or a tendency toward them and will benefit by some special

attention in the correct use of the body in sitting, standing, walking, and weight carrying.

A small number will have such marked postural defects that they will need more individual corrective training than the others. The large majority may participate in all the activities that have been selected as suitable for their grade.

INDIVIDUAL GYMNASTICS

RELATION TO THE PHYSICAL EDUCATION PROGRAM. While the physical education program should be generally preventive in nature, it would be incomplete if it ignored the corrective factors. Individual gymnastics are corrective exercises which aim to prevent, cure, or arrest an existing anatomical defect or functional disorder, and the value of the treatment is in direct proportion to its ability to change an existing abnormality.

OPPORTUNITIES FOR THE CLASSROOM TEACHER. The classroom teacher has the opportunity to give valuable assistance in the improvement of faulty developmental conditions, as it is during the period of child growth under her observation and care that many abnormalities likely to develop later may be checked or prevented. While there are many instances in which the untrained worker may be of valuable assistance, care must always be taken by the grade teacher not to undertake the work of the professionally trained person without the proper supervision of a skilled expert.

Each case must be treated as an individual problem. The teacher should observe and study each child in the effort to ascertain the existing conditions and in order to determine the most desirable means of approach in appealing to that particular personality.

As a result of her individual study, she should construct a program of treatment best suited to each case. An effort should be made to interest the child in the improvement of his condition but this must be done in a tactful and rather indirect manner. In order to realize the desired results the

child must be interested and must wish to improve, but care must be taken that his thoughts are not centered upon his physical defects. It is most desirable that the teacher cooperate with the parents in this problem. A tactful approach to the parents will, in the majority of cases, secure interest and willing cooperation.

An item so often overlooked by the teacher, but of vital importance, is that of her own example. The school officials and particularly the teacher herself should make every effort to be a living expression of buoyant health.

FACTORS TO BE INFLUENCED BY INDIVIDUAL GYMNASTICS. Although the list of abnormalities to be reached by individual gymnastics contains many items, those within the province of the untrained worker are: faulty posture and abnormal conditions of feet.

POSTURE

1. Flat back. In this condition the natural curves are only partially developed and the entire back presents a stiffened appearance. Such conditions are conducive to back fatigue.

2. Round shoulders. This condition involves an incorrect position of all body segments and is accompanied by an over-relaxation of the back muscles of the shoulder region. This type is especially common among school children, as many of the typical schoolroom positions require a leaning forward.

Symptoms:

- a. The head and neck are inclined forward.
- b. The shoulders droop forward and the shoulder blades are prominent.
- c. The chest is flat and sunken.
- d. The abdomen is relaxed and is apt to protrude.
- e. The entire appearance is of a loose, lazy posture.

3. Lateral postural curvature.¹

¹True lateral curvature (*Scoliosis*) accompanied by structural bony deformity of the spine, and in some cases of the ribs, is a serious physical defect and should always be under the care of a physician. It is important that this condition be recognized very early. The teacher should do everything possible to have every pupil with a marked postural defect examined by a doctor.

Simple curve: This type shows a curve the entire length of the spine.

Symptoms:

- a. The trunk is displaced over the pelvis on the curved side.
- b. The shoulder on the curved side is higher.
- c. The shoulder blade on the side opposite to the curve is prominent.
- d. The hip on the side opposite to the curve is prominent.



FIG. 1. Simple curve

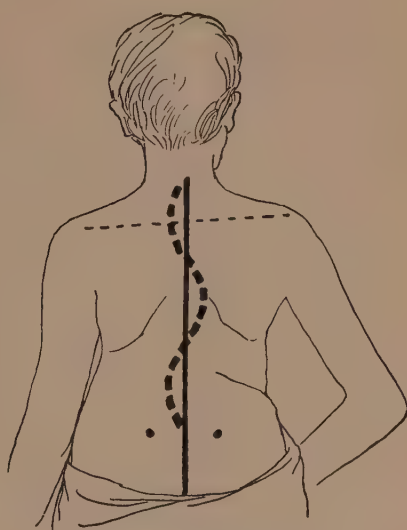


FIG. 2. Compound curve

Compound curve: In this type the spine curves in two or more regions.

Symptoms:

- a. The body segments will be prominent in the region of both curves.
 - b. There will usually be some difference in the height of the shoulders and hips.
4. **Hollow back.** This condition expresses an exaggeration of the forward curve in the region of the waist (lumbar).

The causes of curvatures are as follows:

1. General constitutional weakness caused by too rapid growth or prolonged illness.
2. Poor vision or hearing.
3. Lack of fresh air and sunshine.
4. Lack of wholesome exercise.
5. Unhygienic occupations.
6. Ill-fitting school furniture.
7. Long-continued writing with a faulty position.
8. Ill-fitting clothing which causes a weight sufficient to pull the shoulders forward.
9. Poor personal habits.
10. Poor room-lighting.

METHODS OF TREATING POSTURE PROBLEMS. The instructor must have a clear mental picture and understanding of the normal and correct body carriage before it will be possible to detect faulty positions or to make any effort to improve existing abnormalities. The long axis of the body, passing through the head, trunk, and leg should form a straight line. The center of gravity should be in front of the ankle joints, in front of the knees, anterior to the sacroiliac joints and most of the vertebral joints. Normal posture is an outward expression of inner conditions and should display mental and physical poise, well-balanced, unstrained, with the body weight on both feet and the arms hanging easily.

1. EXAMINATION OF POSTURE. The teacher should make a constant observation and a periodic examination of the posture of each child. A simple method of examination is known as the "window pole" method. A window pole is placed at the side of the pupil, the upper end just in front of the ear and the lower end outside the ankle bone. The axes of the body segments should form a series of straight lines.

The examination should consider the following:

- a. General personal hygiene.
- b. General attitude of alertness or listlessness.
- c. The condition of the feet as to strength, power, construction of arches, pronation, etc. The condition



"Window pole"
method of examin-
ing posture

of the feet has a decided effect upon the carriage and attention must be given to them.

- (1) Observe the direction of the feet in standing and walking. The straight forward direction is to be urged.
- (2) Watch for an apparent weakness or sagging of the foot muscles.
- (3) Inquire as to whether the foot tires easily.
- (4) Observe as to whether the foot rolls inward when the body weight is placed on it. (Pronation.)
- (5) Inquire as to whether pain is experienced after the feet have been used for some time.
- (6) Observe the height of instep arch.
- (7) Observe as to whether the tendon of Achilles (tendon extending up the back of the leg from the heel) rolls outward at the heel, a condition which accompanies a flat foot.

- d. The head and neck should be erect.
- e. A chest that is sunken, flat, and narrow usually accompanies a faulty body carriage.
- f. Observe the position of the shoulders and shoulder blades.
- g. The knees should be observed. Hyperextension usually accompanies a faulty body position.
- h. The abdomen should be held in. A fallen, prominent abdomen accompanies a faulty carriage.
- i. The body weight should be inclined a little forward over the balls of the feet and should be borne equally by both feet.

2. The teacher should make recommendations and suggestions concerning the suitable amount of fresh air, sunshine, nourishing food, and outdoor exercise. Careful living habits

in these respects will greatly benefit the general physical condition.

3. The teacher should give careful consideration to the seating location of each child. Children having vision or hearing defects should be seated in a favorable room location.

4. Every effort should be made to see that the school desks and seats are suited in size to the children using them.

5. Attention should be given to the lighting of the school-room and the light should be adjusted so that it will fall on the work of the pupils in the most favorable manner (see *Modern School Buildings and Their Management*, p. 495).

6. The arrangement of the day's program of activities should be such as will not demand long periods of writing, because the writing position if held too long, is apt to lead to faulty posture.

7. The teacher should give attention and help to the personal habits of the pupils.

a. Prevent careless standing positions of carrying all the body weight on one foot. This is conducive to lateral curvature.

b. Prevent careless sitting positions. The pupils should be encouraged to sit well back in the seat with the feet flat on the floor.

c. Prevent habits of carrying weights in the same hand on all occasions.

8. Consideration should be given to the type of shoes worn by the pupils and they should be encouraged to select the "correct shoe" which has the following features:¹

a. Good appearance

b. Straight inner line

c. Wide shank

d. Roomy upper

e. Heel of medium height and broad

f. Plenty of toe room

g. Lightness of weight

¹Selected from *Individual Gymnastics*, by Lillian Curtis Drew. Philadelphia: Lea and Febiger.

ADDED SUGGESTIONS CONCERNING THE TREATMENT:

1. The teacher should not emphasize the physical defects of the child to the degree that he would be "tagged as unfit."
2. In attempting to improve the posture, treat the body as a whole by telling the child to "stand as tall as possible."
3. The physiologic benefits of a good posture should be explained to the parent but it is a waste of time to do so to the pupil. The social and esthetic values should be emphasized to the pupils.
4. Try to make the child realize that the posture expresses what he really is and that he should try to express strength, power, and joy.

MOTIVATION FOR THE PROGRAM OF INDIVIDUAL GYMNASTICS:

1. Purchase and display posters of the correct body carriage and the desirable type of shoes, etc. These posters may be obtained from health agencies or made by the children.
2. The program of individual gymnastics should be correlated with that of out-of-school activities. Rewards as incentives may be given as an extra stimulus. Good posture may be made a requirement for eligibility to a team.
3. A posture drive may be arranged and with careful supervision should prove valuable. Suggestions for a posture drive are as follows:
 - a. Exhibition of posters
 - b. Parade of good and bad postures. (This should be conducted impersonally)
 - c. Pupil talks on posture
 - d. Student composition of poems and songs dealing with posture, etc.

CHAPTER NINE

THE TEACHER'S OWN HEALTH

BECAUSE health is a manner of living and an attitude toward life rather than a school subject, it can be taught most effectively by the example and inspiration of a teacher who practices, as best she knows how, the habits of physical, mental, social, and spiritual health. This is but one of the reasons why every teacher should seek the best of health; there are many others. Health implies a soundness, a worthiness, and an abundance of life itself; and other things being equal, the teacher whose life is marked by those qualities will be happier as well as more successful in every experience that she may undertake.

HOW MAY THE TEACHER ACHIEVE HEALTH?

Cultivate health as a means, not an end. Give all necessary attention to it, but do not think too much about it. Live rationally and cheerfully, but not introspectively nor anxiously. Health, like happiness, comes to the person who lives in obedience to the laws of life. It is true that fifty children in one room are too many for one teacher, but if you cannot change the situation, accept it as you would a rainy day. The children will tire you more if you begin to pity yourself. Follow the rules of health, not with a deadly seriousness, but as a part of the rules of the game of getting and giving the most in living.

KEEP THE MACHINE IN GOOD ORDER

The human machine deserves as good care as does a good automobile. Your feelings alone cannot tell you whether the machine is in good condition. Serious health defects some-

times exist without causing pain or discomfort; again, there may be pain that is quite out of proportion to the actual defect, or that is found far from the location of the trouble.

HOW TO JUDGE ONE'S OWN PHYSICAL FITNESS

By what signs, then, may you conclude that you are physically fit? Here are some of them:

1. A sense of physical well-being. This means that you should feel a zest and satisfaction in mental and muscular effort; an interest and joy in work and recreation, kept in sensible proportion and balance; and a freedom from pain—for this inevitably interferes with clear thinking, concentrated and effective work.

2. A feeling of being refreshed and recuperated on rising in the morning after a customary night's rest, and a feeling of healthy fatigue as bedtime approaches. The hangover of fatigue in the morning, experienced by so many teachers, should be escaped from as fast as possible. On the other hand, a feeling of intellectual keenness and brilliancy in the late evening should be viewed with suspicion. It is an auto-intoxication of the nerves.

3. Enjoyment of wholesome food, including a moderately good appetite, even for breakfast. To begin the day's work without a fairly nourishing breakfast is just as sensible as for a steamer captain to stoke his furnaces with the chopped up woodwork from his vessel. This extraordinary expenditure of fuel may, in both cases, be necessary in rare emergencies, but it is highly extravagant and, moreover, harmful to the internal architecture of the human as well as to the ship.

4. Body weight maintained at about the proper standard for height and age. A person who is 10 per cent or more under standard weight is probably undernourished and to some extent deficient in energy and endurance. The individual who is more than 10 per cent above standard weight is carrying "excess baggage" which is apt, with advancing years, to prove a handicap to health or perhaps to life.

5. Elimination from the intestinal tract. This should take place at least once daily and regularly.

6. Freedom from persistent worry. This is one of the most destructive influences upon life, health, and physical as well as mental fitness.

AIDS TO HEALTH AND FITNESS

The following are good suggestions for the teacher to carry out in guarding her own health:

1. *Do the best you can with what you have.* Admit to yourself the limitations upon your health, if such have been imposed upon you by ancestral influence and your own past life; but do not be discouraged because of these or excuse yourself for being a health slacker. Then do the best you can with what you have. The health accomplishments of some delicate children and adults make up notable chapters, even if unrecorded, of heroic human achievement.

2. *Free yourself from physical defects that are remediable.* Even one such defect may lower your physical fitness, and a thorough health examination may do much to discover such defect. The eyes, ears, and teeth especially should be looked after. Defective eyes and ears may obstruct mental development, injure the general health, and produce serious social and economic loss. Visit the dentist regularly. Unrecognized decay of teeth will lead to destruction of teeth and to abscesses. Be sure that your eyes are doing their work efficiently, and without avoidable strain. Visit an oculist, particularly if you have frequent headaches, or if your own vision is questionable as tested by the methods used in testing the children's eyes. Be willing to discover and correct your physical defects before they cripple you.

3. *Eat wisely.* If you eat intelligently and sensibly, but not too seriously, you will enjoy your food more, and will avoid the ills that careless eating causes so many teachers. Healthful diets for children have been recommended in an earlier chapter, and what is good for children is also very good for

adults. Eat regularly. Have a good breakfast. No teacher can do her best teaching after a breakfast which consists of a cup of coffee and a roll or doughnut. Have an unhurried, adequate noon meal, which, even if you must carry your lunch, will include one hot dish, prepared at school or carried in a thermos bottle.

Avoid eating your meals alone; if possible, do not talk about school all the time that you are eating with someone else. If you are from 10 to 15 per cent or more overweight, eat three moderate meals a day (unless a special diet has been advised by a physician), but eat little of the sweet, starchy, and fat foods. If you are underweight, also eat regularly; lie down whenever possible for a few minutes before and after meals, and relax, ready to enjoy your meals; drink the mid-morning milk with the underweight children; drink a glass of milk with your meals, and take an extra serving of butter each meal.

4. *Get enough rest and sleep.* Spend eight or nine hours in bed every night. Few teachers can live at their best with less than eight hours in bed daily. Sleep out of doors if you can, or with as much outdoor air as possible. If you can do so, lie or sit down at least ten minutes during the noon hour. Every school building should have a rest room for teachers to make this noontime rest habit possible. In rural schools it may not be possible to have a special room in which the teacher may rest, but in such case, a corner of the room may be screened and furnished with a couch, a chaise longue, or simply a restful chair.

5. *Change of position is desirable.* Of necessity, the teacher stands much of the time during school hours. Therefore, a good standing position and well-fitting, hygienic shoes will greatly lessen fatigue and increase comfort and efficiency. The teacher should avoid standing too long at a time; it is unnecessary and undesirable. The fact that it is not good for women to stand long hours steadily has been recognized by the laws of many of the states that now require department stores and other industries to provide some means so

that women may sit down at least occasionally during their working hours. The teacher should plan to sit during the teaching of certain classes. Sitting during a reasonable part of the school day need not detract from the standard of work; on the contrary, it will add to it.

6. *Keep fit.* A girl athlete, graduate of an eastern normal school and champion in the Olympic Games in Europe, was asked how and when she trained for her athletic contests. "Oh," she said, "I keep in training all the time. It makes me feel so much better, whatever I am doing." Wise is the teacher who maintains the fitness of vigorous health by wholesome eating, adequate rest, sufficient outdoor exercise, recreation, freedom from worry, and all the other factors involved in hygienic living.

It may be well to mention here that irritation and strain of the throat may be avoided by keeping the voice low and natural, remembering that a good teacher makes the children do much of the talking. One of the most effective ways to avoid catching cold easily is the daily cool bath in the morning, this to be followed by a brisk rub with a coarse towel. Constipation not only causes headaches, indigestion, and other disturbances, but it also makes a person more susceptible to various ailments, including colds.

7. *Live part of each day outdoors.* The teacher should spend at least one hour a day in outdoor recreation. Hurried walking back and forth between school and boarding place, with the arms full of books and the mind full of school, is *not* outdoor recreation. She should find something to do outdoors that she thoroughly enjoys; and, if possible, get this recreation during the sunlight hours of the day—between the closing of school and the evening meal, on school days.

Fortunate is the teacher who is interested in some nature hobby. Hikes and picnics may be enjoyed by everyone; some localities offer possibilities for swimming, rowing, tennis, golf, horseback riding, or skating; and always there is the opportunity to play the outdoor games suggested for the children. Sharing in garden or light farm work may solve the problem in

some places. Wherever she is, the teacher should be persistent in finding outdoor exercise that is fun for her, and that is vigorous enough to require deep breathing.

THE WELL-ROUNDED LIFE

A proper balance should be set between school and outside interests. There are those teachers who live in their homes, and do much besides their teaching; others may be so much interested in social or outside activities that school is seldom thought of except during school hours. Such teachers—meaning the latter type—have little consideration or respect for their profession, and will probably not take time to read these pages; hence, this paragraph is intended—in the main—for the teacher who takes her work too seriously. It is she who stays after school for long hours, planning work, who exhausts her energies by work and worry to such an extent that she has no real life left for counterbalancing interests. Such interests are necessary to prevent one from becoming narrowed down to an outlook bounded by the walls of the schoolroom. One should know the big events that are going on in the community and the world in general; a social organization that includes others besides teachers often solves the problem of an outside interest. There may even be a tonic effect in the planning of clothes, and in presenting a good appearance. Occasionally one may plan some special treat for the week-end. In all cases, there is wisdom in the hobby that one can pursue hard enough to forget for a time all the problems of the school; and always there is at least some part of every vacation to which one can look forward with enthusiasm.

At any cost, every teacher should have some growing interests outside of the school, even at a reasonable subordination of things that may seem necessary to her work. In the long run, it will pay. Without the activities and interests, school work will become stale and unprofitable, the teacher discontented, and life a grind of routine.

Teaching is the finest of all professions. She who gives her best to it is the teacher who lives the most abundant, the most worth-while life, giving therefrom to her pupils and her community, through unselfish devotion and service, the best that her professional wisdom and skill make possible.

NOTE: The author of the various sections in THE CLASSROOM TEACHER dealing with Health and Physical Education wishes to express his appreciation of the valuable assistance given him in his preparation of this material by the following professional students: Amy Hale, Jessie S. Herriott, Isabel G. Haggerty, Carol Phillips, Myra F. Foley, Gertrude J. Samuels, Marion M. Martin, Elizabeth McHose, and Olive E. Potter.

Thomas A. Wood

MODERN SCHOOL BUILDINGS
AND
THEIR MANAGEMENT



By

N. L. ENGELHARDT, Ph.D.
Professor of Education
Teachers College, Columbia University

MODERN SCHOOL BUILDINGS AND THEIR MANAGEMENT

CHAPTER ONE

BUILDINGS AND GROUNDS

DURING the first quarter of the twentieth century, exceedingly rapid progress was made in the United States in the betterment of schoolhouses and in the acquisition of larger school sites. Hundreds of millions of dollars were spent during this period in substituting superior consolidated schools for one-room buildings, in replacing worn-out and wretched city schools with attractive fire-resistive structures, and in purchasing school grounds of reasonable size, equipping them with play apparatus, and landscaping them with beautiful trees, shrubs, and lawns.

PLANNING THE MODERN SCHOOL

A SUGGESTED PRINCIPLE IN SCHOOL PLANNING. During these first twenty-five years of the century, a splendid beginning was made toward reaching one of the desirable aims of education. This principle or aim should be foremost in every teacher's mind, as it is a corollary to the principle of equal opportunity for all boys and girls. The principle might read as suggested at the top of page 448.

The building in which every child attends school should be planned to safeguard him from fire and panic dangers, to provide healthful, cheerful, and sanitary surroundings, and to make possible an educational program which will meet his needs.

SCHOOL BUILDING SURVEYS. Much of the impetus for the better planning of school buildings during this period was due to the institution of the school survey movement in the United States. Many school building surveys have been made, pointing out the desirable and undesirable factors in city, county, and state school buildings and indicating how these factors should be remedied in new building construction. Many of the state school building surveys have been made by the General Education Board of New York City, and scores of county and city school building surveys have been conducted by educational experts from Teachers College, Columbia University, the School of Education of the University of California, the School of Education of the University of Iowa, the School of Education of the University of Minnesota, Peabody Teachers College at Nashville, Tenn., and many other institutions interested in the promotion and welfare of public education.

Teachers should become familiar with the character of these surveys and the work which has been accomplished by them. In some cases, these school building studies cover but a few pages, and in other cases the description of the existing school plant and the program for improvement have required volumes of 200, 300, and 400 pages.

For the reader who is interested in discovering the contents of a complete school survey, it is suggested that reference be made to the state building surveys of North Carolina, Alabama, Kentucky, and Indiana made by the General Education Board of New York City, or the city school surveys of Atlanta, Ga., Baltimore, Md., Providence, R. I., St. Joseph, Mo., Tampa, Fla., or Port Arthur, Texas, made by Professors George D. Strayer and N. L. Engelhardt of Teachers College, Columbia University.



Ernest Sibley, architect

FIG. 1. When this splendid junior high school was built in Trenton, New Jersey, much thought and care were given to beautifying the grounds

In any community in which school accommodations provided a generation or more ago are in use, there needs to be made a careful survey with a view to reconstruction or abandonment of buildings that are at present unfit for the purpose for which they are used. The ordinary observer is apt to think of a building as good or poor in terms of some particular part of the building with which he is familiar. There is need for much more careful scrutiny and evaluation of each one of the elements which go to make up a satisfactory school plant.

HOW SCHOOL BUILDING SCORE CARDS ARE USED. To make possible this more detailed and accurate evaluation of buildings, score cards and standards for the measurement of school buildings have been developed. Such score cards are available for practically all kinds of school buildings. The most widely known and used score cards have been prepared by Drs. George D. Strayer and N. L. Engelhardt and are as follows: Score Card for Elementary School Buildings, Score Card for High School Buildings, and Score Card for Village or Rural School Buildings of Four Teachers or Less, published by the Bureau of Publications, Teachers College, Columbia University. Some of the other well known score cards for rural schools are: A Score Card for Rural School Buildings, by E. J. Ashbaugh and P. R. Stevenson, published by Ohio State University, Columbus, and The Butterworth School Building Score Card, by Julian E. Butterworth, published by the World Book Co., Yonkers-on-Hudson, N. Y. The majority of the state educational departments of the various states have also published score cards and standards for various types of schools. These can readily be secured from the educational authorities of any state.

A reproduction of the Strayer-Engelhardt Score Card for Elementary School Buildings is shown on page 451. If a school building is considered perfect in all particulars, a score of 1,000 points is allotted to it through the agency of this score card. The score card presents three double columns in which the scoring is done. The first part of each double col-

STRAYER-ENGELHARDT SCORE CARD FOR ELEMENTARY SCHOOL BUILDINGS

Score of Building

	1	2	3
I—SITE			125
A. Location.....		65	
1. Accessibility.....	25		
2. Environment.....	30		
B. Drainage.....		30	
1. Elevation.....	20		
2. Nature of soil.....	10		
C. Size and Form.....	40	40	
II—BUILDING			165
A. Placement.....		25	
1. Orientation.....	15		
2. Position on site.....	10		
B. Gross Structure.....		60	
1. Type.....	5		
2. Material.....	10		
3. Height.....	5		
4. Roof.....	5		
5. Foundations.....	5		
6. Walls.....	5		
7. Entrances.....	10		
8. Aesthetic balance.....	5		
9. Condition.....	10		
C. Internal Structure.....		80	
1. Stairways.....	35		
2. Corridors.....	20		
3. Basement.....	15		
4. Color scheme.....	5		
5. Attic.....	5		
III—SERVICE SYSTEM			280
A. Heating and Ventilation.....		80	
1. Kind.....	15		
2. Installation.....	15		
3. Air supply.....	15		
4. Fans and motors.....	10		
5. Distribution.....	10		
6. Temperature control.....	10		
7. Special provisions.....	5		
B. Fire Protection System.....		65	
1. Apparatus.....	10		
2. Fireproofness.....	15		
3. Escapes.....	20		
4. Electric wiring.....	5		
5. Fire doors and partitions.....	10		
6. Exit lights and signs.....	5		
C. Cleaning System.....		20	
1. Kind.....	5		
2. Installation.....	5		
3. Efficiency.....	10		
D. Artificial Lighting System.....		20	
1. Gas and electricity.....	5		
2. Outlets and adjustment.....	5		
3. Illumination.....	5		
4. Method and fixtures.....	5		
E. Electric Service System.....		15	
1. Clock.....	5		
2. Bells and gongs.....	5		
3. Telephone.....	5		
F. Water Supply System		20	
1. Drinking.....	10		
2. Washing.....	10		
3. Bathing.....	5		
4. Hot and cold.....	5		
G. Toilet System		50	
1. Distribution.....	10		
2. Fixtures.....	10		
3. Adequacy & arrangem't.....	10		
4. Seclusion.....	5		
5. Sanitation.....	15		
IV—CLASSROOMS			290
A. Location and Connection.....	35	35	
B. Construction and Finish.....		95	
1. Size and number.....	25		
2. Shape.....	15		
3. Floors.....	10		
4. Walls and ceilings.....	10		
5. Doors.....	5		
6. Closets.....	5		
7. Blackboards.....	10		
8. Bulletin boards.....	5		
9. Color scheme.....	10		
C. Illumination.....		85	
1. Glass areas.....	45		
2. Windows.....	30		
3. Shades.....	10		
D. Cloakrooms & Wardrobes.....	25	25	
E. Equipment.....		50	
1. Seats and desks.....	35		
2. Teacher's desk.....	10		
3. Other equipment.....	5		
V—SPECIAL ROOMS			140
A. Large Rms. for Gen. Use.....		65	
1. Playroom.....	10		
2. Auditorium.....	15		
3. Library.....	10		
4. Gymnasium.....	15		
5. Swimming pool.....	5		
6. Lunchroom.....	10		
B. Rms. for School Officials.....		35	
1. Officers.....	10		
2. Teachers' room.....	10		
3. Medical suite.....	10		
4. Janitor's room.....	5		
C. Other Spec. Serv. Rms.....		40	
1. Household arts.....	20		
2. Industrial arts.....	10		
3. Gen. science & drawing.....	5		
4. Storerooms.....	5		
TOTALS	1000	1000	1000

Instructions for Using Card—(1) Basis for scoring, 1000 points. (2) For scoring three columns are allowed. While actually at work on a building only the first need be filled out, the second and third to be filled out at leisure. (3) Where credit is allowed for any single item not present and not needed in a building draw a circle around such credit. All scores should be recorded on the basis of the standards outlined in the bulletin, *The Strayer-Engelhardt Standards for Elementary School Buildings*, Bureau of Publications, Teachers College, Columbia University, New York City.

umn contains the maximum possible score that can be allotted for any factor in the site or school building. The second part of each double column is left blank for the score which is to be allotted each detail of the building.

Each score card is accompanied by a set of building standards which afford the basis for contrast with a building which is being scored. These standards are the desirable building and site conditions which should prevail and it is only as contrast is made with such desirable methods of planning, equipping, and building school structures that satisfactory buildings can be secured.

The authors of these score cards and standards have found that a school building which scores less than five hundred points can seldom be reconstructed or repaired so as to make it a satisfactory school plant. In many of the cases given in Table I, the buildings in which children were housed were insanitary and dangerous in the extreme. It is only as one undertakes a careful analysis of the situation, such as is suggested by the score card and by the standards which are contained in the pamphlet, that one can reasonably hope to present to the public the need for a program for school buildings which may involve the abandonment of schoolhouses now in use and the erection of a very much better type of school plant.

In Table I will be found some of the scores allotted to school buildings in surveys where the score card has been applied.

STANDARDS FOR SCHOOL BUILDINGS. Where school boards or school superintendents are asked to pass upon plans, the score card and standards are of the utmost significance. As one takes each of the several items appearing on the score card and applies the standards which are suggested, he will often be surprised to discover that a plan which appears to be fairly satisfactory will be proved to involve a lack of appreciation of the standards of modern schoolhouse construction to a degree that ought to make any board of education or superintendent of schools ashamed to acknowledge

TABLE I

SCORES ALLOTTED TO SCHOOL BUILDINGS IN FIVE SURVEYS
BY JUDGES USING THE STRAYER-ENGELHARDT SCORE CARD

ELEMENTARY SCHOOLS

Scores	Atlanta 1922	Baltimore 1921	St. Paul 1917	Omaha 1917	St. Joseph 1923
0- 100	4	2	.....	.....	.....
101- 200	8	15	.....	.....	1
201- 300	8	20	.....	.....	3
301- 400	14	36	2	5	9
401- 500	6	32	7	11	7
501- 600	18	20	23	17	2
601- 700	6	12	13	10	6
701- 800	.....	3	3	8	1
801- 900	.....	.....	.....	1	.....
901-1000	.....	.....	1	.....	.....
Total	64	140	49	52	29

HIGH SCHOOLS

Scores	Atlanta 1922	Baltimore 1921	St. Paul 1917	Omaha 1917	St. Joseph 1923
0- 100	.....	.....	.....	.....	.....
101- 200	2	.....	.....	.....	.....
201- 300	1	2	.....	1	.....
301- 400	.....	5	.....	.....	.....
401- 500	.....	3	.....	.....	1
501- 600	1	4	.....	2	3
601- 700	.....	.....	.....	1	.....
701- 800	.....	2	1	.....	.....
801- 900	.....	.....	3	.....	.....
901-1000	.....	.....	.....	.....	.....
Total	4	16	4	4	4

his responsibility for it immediately after its construction.

Giving to a schoolhouse a score out of a possible 1,000 en-

ables the parent and taxpayer to get an idea of how adequate a schoolhouse is for the children of the community. Teachers fully realize the necessity of having the taxpayer visualize the existing situations as contrasted with the ideal or with more satisfactory conditions existing elsewhere.

It is recognized as true that all too frequently in the past educational structures have been erected without due recognition of such important matters as the following: the need for rapidity in the circulation of children through buildings; the arrangement of rooms with reference to shape and size; the acceptance of the most desirable standards for lighting, safety, and sanitation; and the provision of those facilities which clearly defined educational objectives make essential.

It is also clear that in the building of school plants only slight attention has been paid to future needs. Many large private organizations serving public needs have found it necessary, before erecting new plants, to think and plan in terms of future needs. The stockholder's demand for dividends forces the corporation to plan the layout of its plant with due regard for future efficiency and future saving. Such private organizations frequently stop for inventory taking in order to determine the wisdom and success of the policies pursued. Every school community will find it advantageous to stop at certain time intervals and make an inventory of the school equipment which it is providing for its boys and girls.



G. D. Strayer and N. L. Engelhardt, educational advisers

Charles Barton Keen, architect

FIG. 2. This 1,000-point school building was planned for Winston-Salem, North Carolina. Every facility was used to secure light, air, convenience, and beauty



Thomas P. McLaughlin, architect

FIG. 3. A patio with open-arched corridors, shown here as a feature of this Hollywood, Florida, school, is typical of many Florida schools

GOOD CLASSROOM SURROUNDINGS AND THE EDUCATIONAL RESULT. Most experienced teachers appreciate the fact that the physical conditions surrounding children have a profound effect upon their attitude toward work and the consequent efficiency of instruction. Children are very sensitive to stimuli of every description. They are made happy by seeing the teacher appear in a bright new dress. They become restless when their routine is suddenly broken by an unexpected noise or other disturbance. They bloom under the effect of exercise in the open air and they droop when crowded together in a hot room.

One of the most important duties of the teacher is to see that the physical conditions of the classroom are as nearly perfect as possible. In so doing, she is making her work easier, making the children happier and more efficient, and, through suggestion and example, establishing habits which will be helpful throughout the life of the individual child.

TEACHERS SHOULD ASSIST IN SCHOOL PLANNING. Teachers often are given an opportunity to assist in planning school buildings. It is not expected that they should become familiar with materials of construction, with types of architecture, the sizes of bricks or the lengths of lumber. If satisfactory conditions are to surround a teacher when she is at work, it is to be expected that the teacher should become thoroughly familiar with those aspects of building construction which

affect school work, to the end that the teacher's judgment and knowledge will play a large part in the planning of buildings. The amount of window area necessary for a classroom, the proper heights of blackboards, the proper location of doors in classrooms, and many other similar factors are important when the educational program is being considered. It is therefore no more than proper that the teachers should know the best procedures and should endeavor to have them given full consideration in the planning of a new school building.

THE EDUCATIONAL EXPERT AND THE SCHOOL ARCHITECT. School building construction in the United States has not been able to keep pace with the increases in enrollment of school children. This has been particularly true since the World War. An unprecedented demand has developed for school facilities which will properly house boys and girls of the upper six years of the public school course. The youth of today are insisting to a degree never realized before upon an education which will fit them for their life work. This has resulted in the need for the greatest economy in the planning of new buildings. Waste space, unscientific orientation, ill-adapted schoolrooms, and unsatisfactory special rooms, such as laboratories, auditoriums, and gymnasiums, can no longer be tolerated. The desire to secure the most satisfactory results from necessarily large expenditures of money to be incurred has resulted in the development of educational engineers who assist architects in the planning of school buildings. Their purpose is to secure the utmost of educational return for every dollar invested in the school plant.

FIRE-RESISTIVE CONSTRUCTION. During the first quarter of the twentieth century, the loss of school property due to school fires was appalling. The number of school children who lost their lives was also alarmingly large. One of the worst disasters during this period occurred in a city elementary school building where 173 school children and teachers lost their lives. Another disaster upon which the attention of the country was focused developed in a small two-story two-room rural school where the lives of 74 adults



G. D. Strayer and N. L. Engelhardt, educational advisers

Siarrett & Van Fleet, architects

FIG. 4. Garden City School, Garden City, Long Island, is typical of the beautiful buildings which adorn many suburban residential communities

and their children were destroyed by fire. A third serious disaster occurred in a one-room wooden rural school. Thirty-three persons met death in this one-room school fire. That such a great loss could occur in a small building emphasizes the importance of proper consideration of this great hazard when school buildings are being built. It is wise to build of fire-resistive materials with the understanding that no building could be made completely fireproof. All buildings should be so planned that readiness of exit is provided for all persons who are ever required to use the building.

CORRIDORS AND STAIRWAYS. The adequacy of the entrances, stairways, and corridors is of great importance. Entrances should be wide and free from outside obstructions. There should be a pair of double doors opening outward and provided with panic bolts which permit of their opening by throwing the weight of the body against them. Buildings containing more than two rooms should have additional entrances with double doors. Corridors should provide ready access to stairways and entrances and permit rapid circulation to any part of the building. They should be wide enough to prevent congestion and abundantly provided with natural light. Floors should be fireproof, noiseless, and durable, preferably of cement overlaid with terrazzo or linoleum. Corridors should be kept free from lockers, cases, pedestals, and other such obstructions which would hinder passage to exits and stairways.

Stairways should be completely fireproof and entirely separated from the corridors by fire doors. They should be from four to five feet in width and provided with broad landings. Hand rails should be provided on both sides. Treads should be 10 to 12 inches without overhang, risers 6 to 7 inches. Stairways should be located on outer walls, leading directly to exits, and should be accessible to corridors. They should be sufficient in number and of adequate capacity to empty the building in three minutes or less on the basis that 120 pupils, two abreast, can pass a given point in one minute. They should be well lighted, soundproof, and easily cleaned.

PROVISION FOR VARIOUS KINDS OF ROOMS IN AN ELEMENTARY SCHOOL BUILDING. An elementary school building in which 500 or 600 boys and girls are to be taught and trained is not a simple structure. In fact, it has become a very complicated building. Following are listed the kinds of rooms which have been considered the standard rooms for the elementary schools of a large city. The teacher realizes that each one of these rooms requires special planning if the educational program of children is to be properly advanced. The number and kinds of rooms are given here to make clear the enormity of the problem of planning a school building.

*Classrooms and
Cloakrooms*

1st Grade
2d Grade
3d Grade
4th Grade
5th Grade
6th Grade
Ungraded

Principal

Office
Storage
Toilet
Vault

Storage Room

Textbooks and
General Supplies

Health Supervision

Physician's Room
Toilet
Dressing Booths
Dental Clinic
Nurse's Room
Psychological Clinic

Teachers' Room

Kitchenette
Lunch and Work Room

Rest Room

Toilet

Library

Reading Room

Woodworking

General Shop

Playrooms

Playrooms (Boys)

Playrooms (Girls)

Engineering

Engineer's Room

Toilet

Air Washer Room

Ash Storage

Boiler Room

Coal Storage

Fan Room

Heating Chambers

Plenum Chamber

Supplies (Oil, etc.)

Supplies (General)

Switchboard

Workroom

Household Arts

Cooking Room

Kindergarten

Assembly or Game Room

Occupation Room

Storage Room

Toilet and Lavatory

Cloakroom

Auditorium and Gymnasium

Main Floor

Balcony

Dressing Room

Picture Booth

Stage

Director's Room

Locker Room (Boys)

Shower Baths (Boys)

Toilet (Boys)

Locker Room (Girls)

Shower Baths (Girls)

Toilet (Girls)

Community Room

Community Room

Toilet

Lunch Room (Pupils)

Lunch Room

Kitchen

Home-Making Rooms

Bedroom

Dining Room

Service Department

Janitress' Room

Supply Closet

Toilet

Janitor's Room

Supply Closet

Toilet

Slop Sink Closets

Pupils' Service

Bicycle Room

Toilet Rooms

(Boys and Girls)

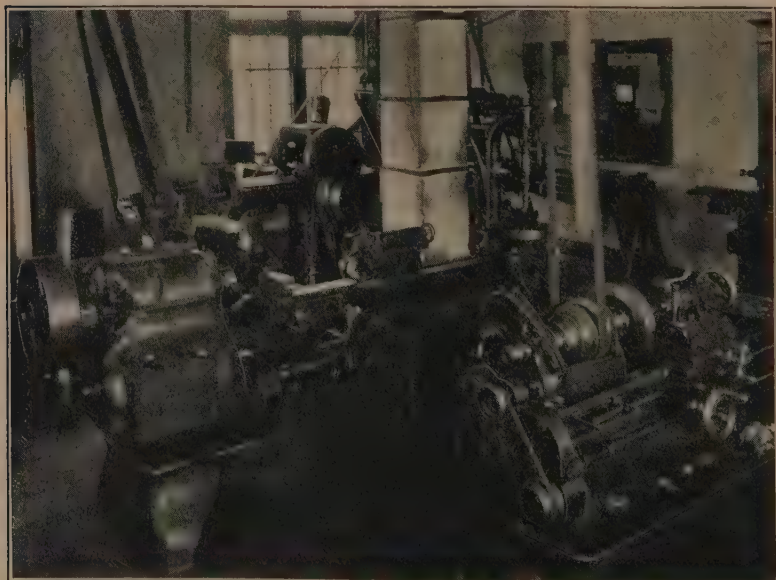


FIG. 5. Machine shops and like equipment are provided for boys in the modern school



FIG. 6. A print shop such as this is but one of many specialized rooms included in schools today

ROOMS IN A JUNIOR HIGH SCHOOL. The specialized needs in education are still more greatly emphasized when one studies the kinds of rooms which are to be found in modern junior high schools. The 141 rooms here listed are included in planning junior high schools in one large city.

<i>General</i>	Number of Rooms
Principal's Office.....	1
Assistant Principal's Office.....	1
Clerk's Office.....	1
Girls' Adviser's Office.....	1
Waiting Room.....	1
Assembly Room.....	1
Dressing Room.....	1
Library.....	1
Women Teachers' Rest Room.....	1
Women Teachers' Emergency Room.....	1
Students' Emergency Room.....	1
Doctor's Room.....	1

<i>General—Continued</i>		Number of Rooms
Students' Lunch Room	.....	1
Faculty Lunch Room	.....	1
Serving Room of Faculty Lunch Room	.....	1
Private Dining Room	.....	1
Band Room	.....	1
Storeroom for Band Instruments	.....	1
Janitor's Office	.....	1
Receiving Room	.....	1
Shipping Room	.....	1
Janitor's Workroom	.....	1
Bleacher Storage	.....	1
Fan Room	.....	2
Filter Room	.....	1
Oil Room	.....	1
Pump Room	.....	1
Boiler Room	.....	1
Coal Room	.....	1
Paper Room	.....	1
Total		31

<i>Academic</i>		
Foreign Language	.....	5
English	.....	7
History	.....	7
Mathematics	.....	7
Study Coach	.....	6
Geography	.....	1
Music	.....	2
Drawing	.....	2
Lecture Room	.....	1
Science	.....	4
Science Storeroom	.....	1
Conservatory	.....	1
Teachers' Study Room	.....	3
Applied Art	.....	1
Total		48

<i>Commercial</i>		
Typewriting	.....	2
Bookkeeping	.....	3
Total		5



G. D. Strayer and N. L. Engelhardt, educational advisers

Ernest Sibley, architect; Lawrence C. Licht, associate
FIG. 7. This attractive library of an Orange, New Jersey, high school is quiet and conducive to study

Household Arts

	Number of Rooms
Household Science	1
Cookery	4
Laundry	1
Sewing	4
Dressing Room	1
Millinery	1
Regular Classrooms	4
Office	1
Storeroom	1
Dressing Room	1
Total	19

Industrial

Office	1
Regular Classroom	1
Lecture Room	1
Drafting	2
Commercial Art	1
Applied Science	2
Machine Shop	1
Printing	1
General Woodworking	1
Electric Shop	1
Foundry	1
Pattern Making	1
Foundry Storeroom	1
Blue Printing Room	1
Total	16

Physical Training

Gymnasium	2
Gymnasium Storeroom	2
Plunge	1
Director's Office	2
Assistant Director's Office	2
Examination Rooms	2
Locker Rooms	2
Shower Rooms	2
Basket Rooms	2
Classrooms	2

Physical Training—Continued

	Number of Rooms
Delivery Rooms.....	2
Gymnasium Laundry.....	1
Total.....	22
Grand Total.....	141

ROOMS IN A RURAL SCHOOL. The items appearing on the Strayer-Engelhardt Score Card for Rural School Buildings, as reproduced on page 466, show the many details which must be given consideration even in the planning of a rural school building. The size, character, and equipment of the classroom in a rural school may vary from that in the elementary and junior high schools. Other features may vary, as is clearly pointed out in the illustrations throughout this department.

DESIRABLE TYPES OF CLASSROOMS. Classrooms should be rectangular in shape with windows on the left side of the pupils. Desirable types of classrooms for the elementary school and the high school are shown on pages 470 and 472. The outstanding differences in these two types may be readily observed by the teacher or the layman. These differences are due to variations in the needs of the educational program and the way in which the two types of schools are administered.

The minimum requirement for elementary schools should be 15 square feet of floor space and 200 cubic feet of air space per pupil. With these standards, a room 22x28x12 feet will accommodate 30 children, while 40 pupils will require a room 23x29½x12 feet. The width is determined by the generally accepted standard that it should never exceed twice the height of the room where unilateral lighting is used. Where outside conditions are unfavorable, even this width is too great, since the illumination should be by direct rays of sky light. Remembering that the intensity of light decreases with the square of the distance from the source, we realize that there is great danger of insufficient illumination of the row of desks next to the inner wall. The length of the classroom is deter-

mined by the ease with which pupils in the rear seats can read writing and see drawings on the front blackboard. Experimentation has proven that a normal eye can easily read well-written letters one and one-half inches high at a distance of 29 feet. Moreover, a room of this length makes it easy for the pupils in the rear seats to hear, without strain, when the teacher speaks in a natural voice. This is a prime

STRAYER-ENGELHARDT SCORE CARD FOR RURAL SCHOOL BUILDINGS

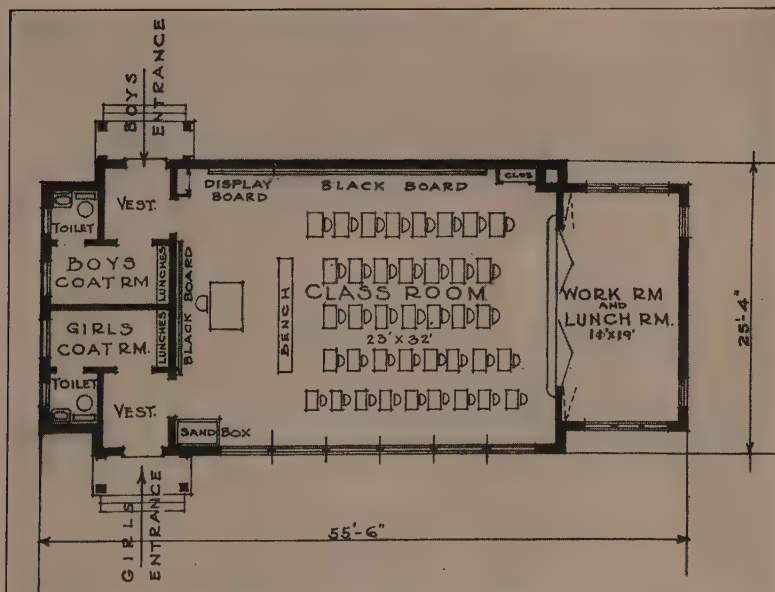
Score of Building

	1	2	3		1	2	3
I—SITE.....			160	E. Sched. & Emerg. Equip'm't.....		20	
A. Location.....		65		1. Clock.....	5		
1. Accessibility.....	30			2. Bell.....	5		
2. Environment.....	35			3. Telephone.....	5		
B. Drainage.....		40		4. First aid.....	5		
1. Elevation.....	20			F. Water Supply System.....		50	
2. Nature of soil.....	20			1. Drinking.....	20		
C. Size, Form and Use.....	45	45		2. Washing.....	15		
D. Flagpole.....	10	10		3. Bathing.....	5		
II—BUILDING.....			200	4. Hot and cold.....	10		
A. Placement.....		40		G. Toilet Systems.....		60	
1. Orientation.....	25			1. Placement.....	15		
2. Position on site.....	15			2. Fixtures.....	10		
B. Gross Structure.....		90		3. Adequacy.....	10		
1. Type.....	20			4. Seclu., sanit. & condition.....	25		
2. Material.....	10			IV—CLASSROOMS.....			225
3. Height.....	10			A. Arrangement.....	10	10	
4. Roof.....	5			B. Construction and Finish.....		80	
5. Foundation.....	10			1. Size.....	20		
6. Walls.....	10			2. Shape.....	15		
7. Entrances.....	10			3. Floors.....	10		
8. Esthetic balance.....	5			4. Walls.....	5		
9. Condition.....	10			5. Doors.....	5		
C. Internal Structure.....		70		6. Closets.....	5		
1. Stairways and corridors.....	25			7. Blkbds. & bulletin bds.....	15		
2. Basement.....	30			8. Color scheme.....	5		
3. Color scheme.....	10			C. Illumination.....		60	
4. Attic.....	5			1. Glass area.....	30		
III—SERV. SYSTEMS.....			250	2. Window placement.....	20		
A. Heating and Ventilation.....		55		3. Shades.....	10		
1. Kind.....	20			D. Cloakrooms & Wardrobes.....	20	20	
2. Installation & distrib'n.....	10			E. Equipment.....		55	
3. Air supply.....	15			1. Seats and desks.....	30		
4. Fans and motors.....	5			2. Teachers' desks.....	5		
5. Temperature control.....	5			3. Other equipment.....	20		
B. Fire Protection.....		20		V—SPECIAL ROOMS.....			165
1. Apparatus.....	5			A. Rooms for General Use.....		80	
2. Fireproofness.....	5			1. Playroom.....	20		
3. Exits.....	5			2. Community room.....	30		
4. Light installation.....	5			3. Library.....	20		
C. Cleaning System.....		25		4. Lunch room.....	10		
1. Kind and equipment.....	10			B. Officials' Consult. Room.....	20	20	
2. Efficiency.....	15			C. Other Spec. Serv. Rooms.....		65	
D. Artificial Light.....		20		1. Industrial arts.....	30		
1. Gas or electricity.....	5			2. Household arts.....	30		
2. Outlets and fixtures.....	10			3. Fuel rooms.....	5		
3. Illumination.....	5			TOTALS.....	1000	1000	1000

Instructions for Using Card—(1) Basis for scoring, 1000 points. (2) For scoring three columns are allowed. While actually at work on a building only the first need be filled out, the second and third to be filled out at leisure. (3) Where credit is allowed for any single item not present and not needed in a building draw a circle around such credit. All scores should be recorded on the basis of the standards outlined in the bulletin, *The Strayer-Engelhardt Score Card for Rural School Buildings*, Bureau of Publications, Teachers College, Columbia University, New York City.



Guilbert & Betelle, architects



Guilbert & Betelle, architects

FIG. 8. An attractive one-teacher school and its floor plan

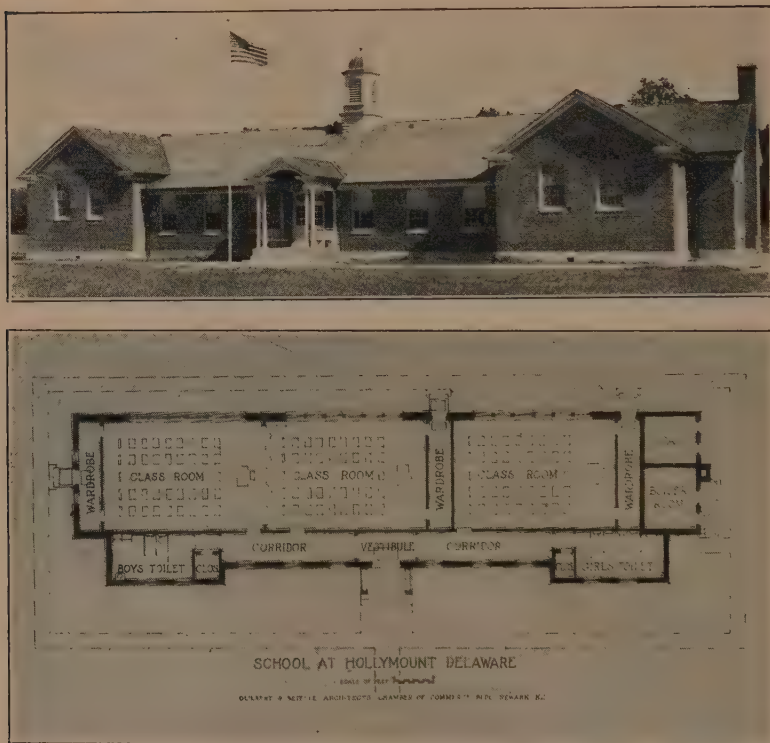


FIG. 9. This three-teacher school has a well-arranged floor plan. Note the outdoor exits to the wardrobes

consideration, particularly in primary grades where the majority of the work is oral. A room longer than 30 feet requires an abnormal effort on the part of the teacher and an undue strain on the listeners in the rear of the room.

The height of the classroom is determined by consideration of air space, window space, and width of room. The figure previously mentioned, 12 feet, permits the most economical construction and, if the windows run nearly to the ceiling, provides adequate illumination.

Classroom doors should be about 3 feet 4 inches by 7 feet and must always open outward. It is advisable to have them hung so that they may be opened completely against the

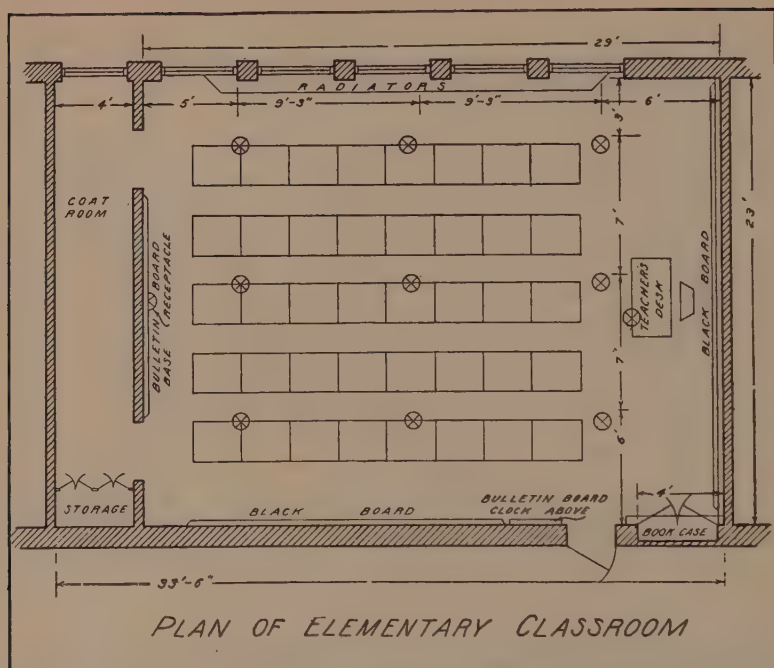


FIG. 11. A study of this classroom plan may give helpful suggestions in construction and arrangement

corridor wall. From a standpoint of beauty and cleanliness, doors should be plain and smooth from top to bottom. The usual cross panel type catches dust and, because of the method of construction, is apt to shrink and sag. The upper part should contain glass panels, as additional illumination from this source is usually needed in the corridors. An excellent practice is to have six panes of plain glass in three rows. The location of all classroom doors in elementary schools should be such as to place them under teacher control. Usually there should be only one to a room. It is most convenient to use a lock on classroom doors which can always be opened from within but which, at the teacher's discretion, can be locked from the outside.

Transoms may be used in the corridor walls for purposes of



Guilbert & Benelle, architects

FIG. 12. Light and air are not lacking in this one-teacher school at Odessa, Delaware

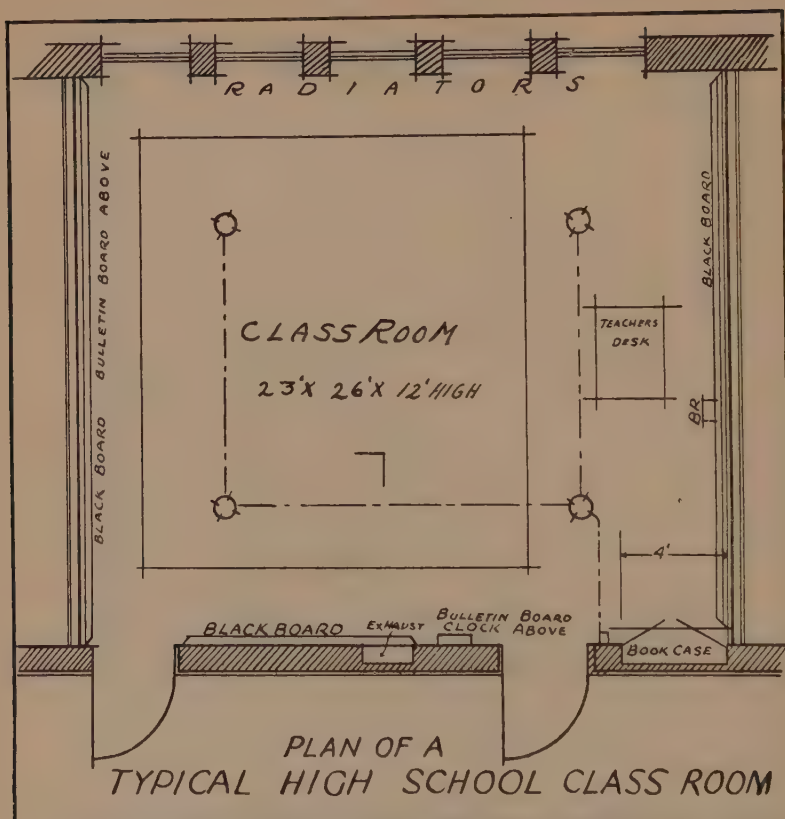


FIG. 13. Note the differences between this plan for a high-school classroom and the elementary-school-classroom plan shown in Fig. 11

ventilation, particularly when the ventilating system is not in operation. Placed as they are, near the ceiling opposite the windows, a circulation of air into the room is always assured, since there is usually a difference in temperature between the outside of the building and the corridor wall. Transoms are especially useful for cross-ventilation of rooms on opposite sides of the corridor and have proved effective in the ventilation of one-story buildings. The panels are usually of glass but wood may be used instead if there is danger of cross-lighting. In the installation, it is necessary

to have them swing from the top on a mechanism which will always operate easily.

FLOORS OF CLASSROOM. Regardless of whether or not the construction of a building is fireproof, the floors of classrooms should be of hard wood. If laid over wooden joists, the floor must be double with deadening felt between. In the case of fireproof construction, the floor is laid on wooden strips or sleepers embedded in the concrete after having been thoroughly saturated with a preservative. The best material for the finish flooring is oak, hard maple, and hard pine in the order named. Maple is softer than oak but wears well if kept well oiled or waxed. Hard pine makes a beautiful and durable floor if carefully selected and properly laid. It is of greatest importance in finishing a new building to insist that the floors be thoroughly cleaned and scraped or sanded until they are perfectly even. Following that, they may be oiled with a mop and allowed to dry for 24 hours, when any excess oil should be removed with a dry mop.

CLASSROOM WALLS AND THEIR COLOR. The method of plastering walls and ceiling contains two items for the consideration of the educational specialist, namely, acoustics and cleanliness. Patent plaster, because of its extremely dense surface, reflects sound waves and produces a reverberation in the room. For this reason other types of plaster should be used. The materials most favorable to good acoustics are wood lath and lime mortar gauged with Keene's cement. A good alternative is a wall of terra cotta or burnt clay blocks covered with lime mortar. Sand finish should never be permitted in the schoolroom because of its great tendency to catch dust. All finish plaster should be troweled to a smooth even finish with a steel trowel.

The standard color scheme for classrooms is as follows: Walls light buff or very light green; ceiling white or extremely light cream; dado slightly darker than the walls and of the same color. The reasons for simplicity in wall coloring are to diffuse the natural light as much as possible and to eliminate extreme colors which often have distracting psychological

effects upon both teacher and pupils. Wall paint should be washable and always in flat tones. Gloss finish should not be used either on walls or furniture because of its tendency to reflect rather than to diffuse the light.

Woodwork should not be painted, but stained, shellacked, and varnished with a flat finish. The color should harmonize with the furniture, an item which enters into the planning of every new building.

THE TOILET ROOMS IN SCHOOL BUILDINGS. This problem should be met in all new school buildings that are constructed by providing toilet facilities in the school buildings on the same floor as the classrooms. In every case, these rooms should be well lighted and adequately ventilated, their floors and side walls should be of moisture-proof cement or tile, they should in every case be white, and they should be washed as often as any mark appears upon their surface.

The fixtures for toilets, even in the one-teacher school, should be of modern construction. Porcelain seats, cut out in front, with water flush or with connection to a chemical tank or to a sewage disposal plant, should in every case be provided. For boys, urinal stalls reaching to the floor, of non-absorbent porcelain, in the ratio of one stall to every twenty-five boys, should be installed. One seat for every twenty-five boys should be provided. In the girls' toilet, one seat should be provided for every fifteen girls enrolled. Approaches to toilet rooms should be properly screened and the rooms for the separate sexes should be kept as far apart as possible. Where they must be placed in adjoining spaces, sound-proof walls should be provided between them.

CLOAKROOMS AND LOCKER SPACES FOR CHILDREN. The many changes taking place in school administration are showing their effect on the character of the space provided for the wraps and extra books of boys and girls. Even in kindergarten rooms this change is being felt. The most desirable method of handling the wraps of boys and girls is through the agency of cloakrooms. This cloakroom may be about four feet wide; it should have two openings into the classroom and none into

the corridor; it should be provided with adequate natural lighting and the hooks should be so arranged as to prevent the coats from being piled upon one another. It is highly essential that children wearing coats to school should have the privilege of keeping them segregated from the coats of other children and having them adequately aired during school hours. All ventilation for cloakrooms should be away from the classrooms. Many of these standards have been followed in the most recent construction. Conditions prevailing in many buildings are, however, very unsatisfactory. Corridors should never be utilized as cloakrooms.

Parents have the right to expect that the school provision for the garments and property of their children will be such that the garments are not injured, are properly dried when the weather is inclement, and are safe from theft or loss. This means that cloakrooms should be under the control of the teacher. In certain types of elementary schools, such as the platoon school where children are constantly passing from one room to another, it has been found desirable to install lockers for each child in the corridor walls. Lockers are noisy, require special attention on the part of teachers, and frequently become the storage places for waste papers, books, and the like.

In rural schools, it has been found much more desirable to plan cloakrooms as shown in many of the illustrations of this article. It is economical to eliminate the doors between cloakrooms and classrooms since the ventilation is from the classroom through these openings.

GOOD SCHOOL SURROUNDINGS

THE IMPORTANCE OF AN ADEQUATE SCHOOL SITE. It is generally recognized that the development of a proper health program for boys and girls and a proper curriculum of health education are basic essentials in any educational development of any race. Health needs cannot be neglected at any time during the educational career of children without a

serious effect upon the individual. It is necessary to inculcate in boys and girls a love for clean sport, a desire for wholesome surroundings, and the habit of conforming to the highest standards of hygiene and sanitation. It is also desirable to develop proper social attitudes of boys and girls toward one another and toward the other members of society. The co-operative participation by school children in wholesome games played out of doors upon well-equipped and well-prepared playgrounds will do much to build up a sturdy and satisfied race of competent men and women.

School boards, in years gone by, have given only slight consideration to the need for adequate playground space. One state school building survey states that the typical school site is a piece of ground triangular or rectangular in form, with an area of less than half an acre, in the angle of the crossroads, on a piece of ground ordinarily not considered suitable for cultivation and not infrequently so low as to make it difficult or impossible of proper drainage. In a great many cases, this little plot of ground is either in a densely wooded section or on the edge of a forest or swamp.

SITES FOR RURAL SCHOOLS. In the more progressive communities throughout the United States, the necessity for providing space enough on the school grounds for play has long been recognized. The standard school site for a one-to four-teacher school should include a minimum of four acres of land, at least three and one-half acres of which are free from buildings, trees, or other obstacles which would interfere with the development of a well-equipped playground. Rural school children need, even more than do the children of our urban communities, an opportunity to learn to play. One of the most pitiful sights to be seen in rural schools is a group of children, during school intermissions, standing around in the yard with no opportunity for play and apparently with no appreciation or understanding of the games in which children find their most worth-while recreation. Whether one considers the problem from the standpoint of the physical welfare of children or from the standpoint of their social and



FIG. 14. A small community school practically planned and architecturally pleasing. Well-kept grounds add to the appearance and should be a universal feature of rural schools

moral development, well-organized play must be considered as significant as the study of arithmetic or the learning to read.

PLAYGROUND APPARATUS. Children of the lower grades of the elementary schools should have seesaws, swings, giant strides, and piles, slides, and the like, as well as space for ring games, basket ball, and other group activities. For the older children, sufficient space for regular baseball for the boys and for tennis and outdoor-indoor baseball for the girls has been provided by communities in which it is believed that an investment in the physical and social well-being of children pays.

THE SIZE OF SITE FOR CITY ELEMENTARY SCHOOLS. In a tabulation of size of school sites made by the National Education Association recently, it was found that more than half of the school sites in cities of 10,000 and above covered at least three and one-half acres. In some cases, these elementary school sites covered as much as ten and even twenty acres.

HIGH SCHOOL SITES. High school sites of twenty acres or more are no longer rare in the cities of the United States. Such cities as Baltimore, Md., Atlanta, Ga., Harrisburg, Pa., Detroit, Mich., Omaha, Neb., Winston-Salem, N. C., Tampa, Fla., Louisville, Ky., and many others have found it possible and necessary to secure large acreages for high school purposes. This is a splendid movement in the proper direction because it provides play space for many school teams of both sexes rather than for a "varsity" team for boys alone.

With the great congestion developing in city streets because of the multiplication of the automobile, the need for making proper provision for school sites should be clear to all.

A NOTABLE EXAMPLE OF GOOD SITE SELECTION

The following quotation from a report on the Winston-Salem, N. C., high school building will indicate the progress which is being made in the selection of sites in cities.

The first requisite in the planning of a high school building is the selection of an adequate site. In many cities,



G. D. Strayer and N. L. Engelhardt, educational advisers

FIG. 15. When this beautiful high school was planned in Orange, New Jersey, the value of an adequate site was fortunately taken into consideration. Now the pupils have plenty of room for recreation grounds

Ernest Sibly, architect; Lawrence C. Licht, associate

this element in the planning is very generally neglected and has resulted in high school structures which occupy the entire site, thus ignoring the socializing values of play. These buildings do not become the architectural asset to the community that should result when large sums of money are spent for building purposes out of the public purse.

The regrets which have followed the erection of a building on an inadequate site in many communities will never be given expression in Winston-Salem, N. C. The seventy-five acres which have made possible a wonderful environment and setting for the new high school plant will suffice for all time. In the plant which is planned for present erection, there has not been ignored the element of extension and expansion. Until Winston-Salem grows to be a city of 200,000 people and perhaps even beyond that point, this high school site will be sufficiently adequate to care for all of the buildings which will be needed for the training of high school boys and girls.

ESTHETIC SURROUNDINGS FOR A SCHOOL BUILDING. The school sites should be easily accessible and surrounded by gardens, trees, and shrubbery. There should be a minimum of noise, dust, and foul air. The building should be placed away from obstructing buildings and trees. The ground should be high enough to assure perfect drainage and should never be selected in the vicinity of stables, dumps, and factories. Even the nature of the soil should be considered, natural ground being preferred to artificially constructed land because of possible contamination of the soil and a consequent menace to the health of children.

PROPER PLACEMENT OF BUILDING. The site should be large enough and of such a shape as to allow the building to be placed properly. This problem alone has a great deal to do with the efficiency of the classroom unit, whether in the large or the small building. There should be ample walks and lawns. Furthermore, the building should be as far as possible away from noisy streets and so placed as to harmonize with the general setting. The building should be faced in such a manner as to provide light to the main classrooms, preferably from the east and west. North light should

be avoided except for special rooms, unless the region has very bright sunlight for the greater part of the year.

Another standard for the size of school site may be expressed in terms of the enrollment of the school. If at least 200 square feet per child of ultimate enrollment in a building is used as the basis for the purchase of land, it will be found much more adequate than former provisions.

PLANNING FUTURE ADDITIONS TO BUILDINGS. The progressive Board of Education no longer thinks of planning school buildings in terms of present-day needs only. It looks forward fifteen or twenty years and takes into consideration all possible elements of growth in the community, as well as in school enrollment. In placing a school building on a school site, future needs must be borne in mind. The greatest utilization of the school grounds should be sought with due reference to the future addition which will be needed to the building.

SUNLIGHT FOR CLASSROOMS. In the location of a building, whether it is the one-teacher rural school or the very complex city high school structure, special attention should be paid to the direction in which the building faces. The direction from which light should enter classrooms will vary in different parts of the country. East and west light are preferred in most parts of the country for classroom purposes. It is desirable that sunlight enter all classrooms at some time or other during the day, while north light or too much direct sunlight should be avoided for all except special rooms. Proper attention to this factor will mean much in the happiness of boys and girls who are to occupy the classrooms over a period of decades.

CHAPTER TWO

EQUIPMENT AND MANAGEMENT

THE decade following the World War found the interest of educators centered in the development of the more adequate equipment for the classrooms as well as for other rooms in school buildings. It was felt that classroom teaching could only produce a maximum return where the equipment needs had been fully analyzed and satisfied. The relationship of equipment to health problems, the great variation in equipment and supply needs due to the introduction of new methods of instruction, and the desire to provide children with equipment which reproduces in large measure real life conditions were factors which tended to arouse interest during this period in the better development of equipment.

Scientific studies covering the nature and cost of equipment have been produced by the Division of Field Studies of the Institute of Educational Research, Teachers College, Columbia University.

PUPILS' DESKS AND SEATS

Pupils' desks are of three general types: (1) Fixed to the floor; (2) movable; (3) chair and table.

FIXED TYPES OF DESKS. The fixed type of desk is the least desirable because it is the most poorly adapted to modern methods of instruction. However, it is the most generally used type and the teacher can do much to minimize its undesirable features. Each room should contain at least three sizes of these desks, all adjustable. It is the responsibility of the teacher to see that the desks are adjusted to fit each individual child as nearly as conditions will permit.

The desks should be arranged in a way to permit the greatest freedom on the part of the children while working at

blackboards, walking in aisles, and while leaving and entering seats. The outside and rear aisles should be as wide as possible and the inner aisles should be not less than 18 inches in width. The best standard for elementary rooms is the following: Inner aisles, 1 foot 6 inches; aisle at outside wall, 2 feet; aisle for inside wall, 3 feet; space between front row and front wall, 7 feet to 8 feet; space between rear seats and rear wall, 7 feet to 8 feet. This arrangement places all desks as near as possible to the source of light, permits easy passage at front and rear, and leaves adequate space in front of the blackboards.

THE MOVABLE TYPE. The movable type of desk is to be preferred in the elementary grades but it requires more attention on the part of the teacher. Its great advantage lies in the flexibility of class arrangement and the readiness with which the classroom floor can be cleared for physical training exercises or other activity. In using this type of desk, the pupil should be taught to keep it in place, to use it quietly, and to be considerate of the rights of other pupils.

CHAIRS AND TABLES FOR CLASSROOM USE. The third type of seating—the chair and table—is becoming popular in many school systems and has certain advantages over the desk type, whether fixed or movable. It approaches most nearly to the conditions which the child will meet in the home and in life. The tables can be arranged in any order and lend themselves most readily to the laboratory method of school work. They lack the adjustable feature, however, and should be furnished in a sufficient number of sizes to take care of the variation in children.

Elementary classrooms may be equipped with a table large enough to accommodate about a fourth of the children. The height should depend upon the age of the children. It should be placed in the rear of the room, preferably near the outside wall where there will be sufficient illumination. Chairs should be furnished in sizes to fit best the members of the class. This table should not become the storage place of flower pots, chalk boxes, and old magazines. It should be kept clear, ex-

cept, perhaps, for a few books held in place with attractive book ends, and should be used primarily as a reading table.

PROPER ADJUSTMENT OF DESKS. From the standpoint of hygiene, the requirements for the proper adjustment of desks are the following: the top of the desk should be inclined about fifteen degrees and at a distance from the eye of about fifteen inches. This permits a comfortable posture for writing and allows the eye to fall nearly perpendicularly on the page. Desks should be placed so that the light falls over the left shoulder.

With movable desks, there is a flexibility of arrangement which makes it possible for each child to secure a maximum of illumination for the position which his desk occupies in the room. The teacher should notice very carefully this point and see that the children form the habit of turning their desks with the above thought in mind. Here, however, lies the main objection to the movable type—it is often turned at an angle which interferes with proper lighting.



FIG. 16. Movable and adjustable desks are but one of the features which give this rural school the advantage over most one-teacher schools

Desk tops should extend over the seats about two inches and should be just high enough to allow the forearms to rest lightly without much weight on the elbows. The distance between the back of the seat and the edge of the desk should be sufficient to prevent pressure against the abdomen but not great enough to require sliding backward to rest the back. The criterion of comfort is simple: while the child is sitting with both feet flat upon the floor, the seat should be just high enough to cause the knee to be bent at a right angle. The pelvis should be resting in a concave seat which prevents the pupil from sliding forward and the back rest should reach just below the shoulder blades. A teacher is justified in insisting that desks be adjusted to the individual children even if it is necessary to remove the desks from the floor to make a new alignment.

TEACHER'S DESK AND CHAIR

The teacher's desk is a very important and much abused item of schoolroom equipment. Desks, as found in the average classroom, are of many varieties, although the accepted standard is a flat-top desk, about 32 by 52 inches. They often reflect the personality of the teacher by the manner in which they are cared for. If the teacher is to set a good example as a housekeeper, she will exercise considerable thought in keeping her desk in order, both inside and out. Nothing should be permitted to accumulate on the teacher's desk. If she has no book shelves, it may be excusable to place a few necessary books on the desk, kept in place by attractive book ends. A blotter and an inkwell may also remain on top of the desk.

The teacher's chair should be of a comfortable type and there should be additional chairs in the room for visitors.

THE ROOM LIBRARY

The room library may be kept in open book shelves which should rest on the floor near the reading table. Here, again,

cleanliness and order should be insisted upon. The books should be arranged at the close of each day, preferably by a committee of the children, and at least once each week they should be removed from the shelves and carefully dusted. More important, perhaps, is the dusting of the shelves, since the worth-while room library will not be idle long enough to permit the accumulation of much dust on the books.

BLACKBOARDS FOR CLASSROOMS

Another very important matter in planning schoolrooms is the composition, size, and position of blackboards. The standard material is highest grade slate $\frac{3}{8}$ inch thick. They must be carefully set, with any uneven joints rubbed until the slate forms one continuous plane across the front and inner wall of the classroom but never between windows. The reason for this is obvious, since a pupil who tries to read by looking directly at a strong source of light places an extraordinary strain upon his eyes. In elementary buildings, it is not necessary to place blackboards across the rear of the room unless the number of children in the class exceeds 30. Even then the use of the board is dependent on the method of instruction employed by the teacher. Specifications should state that "all blackboards shall be of the best grade of hand-shaved, natural slate, free from knots, veins, clay-holes, scale, crossgrain, curl, ribbons, or other defects; finish face on one side only shall be pumiced, rubbed smooth, and of a perfect black uniform color and finish of velvet-like texture."

Blackboards should be so placed as to give children a maximum use of the surface without stretching or stooping in an uncomfortable position. With this in mind there will be a variation in height and distance from the floor, depending upon the grade which occupies the room. In primary rooms, the width should be 28 inches with the chalk rail 24 inches above the floor. For intermediate grades, these dimensions should be 32 and 26 inches, respectively. If a room is to accommodate all elementary grades, as is often the case in

rural schools, it is the best practice to have the blackboard low enough to be reached in comfort by the younger pupils and wide enough to permit the older pupils to write without stooping. In general, it is a mistake to use more blackboard material in a room than is actually required for the use of the particular group of pupils. In the first place, it means an extravagant waste of money, since the material is expensive. In the second place, slate absorbs about 50 per cent of the light, thus cutting down the amount of reflected light where it is most needed—on the inside wall.

A chalk and eraser trough should be placed at the bottom of each blackboard. It should be covered by a wire screen of $\frac{1}{4}$ -inch to $\frac{3}{8}$ -inch mesh hinged every two feet to swing up and back, thus permitting the chalk rail to be easily cleaned. The main purpose is to keep the chalk and erasers free from chalk dust. The inside width of the trough should be $2\frac{3}{4}$ inches and the depth $\frac{1}{2}$ inch above and $\frac{1}{2}$ inch below the mesh.

Blackboards should be kept clean and free from decoration. They should not be used as bulletin boards except in case of emergency. Stencils and borders should not remain indefinitely on the boards because they interfere with proper cleaning and hamper effective use. Teachers should establish in children the habits of neat blackboard work and careful erasing. No child should attempt to write on a board until it has been carefully erased and he should feel responsible for erasing his work when it is finished.

It is important that blackboards be kept clean both from the standpoint of health and effective use. Blackboards vary greatly in the amount of use, depending upon the location in the room and the methods employed by the teacher. Often a portion of the front board is used most and perhaps the one in the rear of the room very little. In order to keep blackboards in good condition, it is the best practice to have them cleaned thoroughly once each week with additional cleanings, as required, of those which are used most (see also p. 510).

FUTURE TENDENCIES IN BLACKBOARD EQUIPMENT. It is clear that a change will take place in the near future in the

amount of blackboard space provided in elementary classrooms. This is particularly true in the lower grades because of the changing tendencies in classroom instruction for lower-grade children. If classrooms for the first and second grades are equipped with tables and chairs, work benches, and other types of equipment which will reproduce real life conditions for children, the need for extensive blackboard space will be eliminated. Much more space then will be used for bulletin display purposes where children may tack their drawings, paintings, reading productions, writings, and any other materials which can thus be presented to the parent, visitor, or fellow-pupil for review.

BULLETIN SPACES IN CLASSROOMS

Teachers are coming more and more to appreciate the importance of bulletin or tack boards. These should be made of cork board and fastened to the wall in the same manner as the blackboard. It is well to locate them in the rear of the room and at the side of the front wall. If they are not provided in a classroom, space can be found by removing one or more sections of blackboard and substituting the cork. It is a mistake to place the tack boards above blackboards because they cannot be reached by the children in that location. Tack boards can be of great value in a schoolroom if used intelligently. On them should be displayed samples of good work in all subjects: collections of drawings; magazine clippings and illustrations; booklets, handwork, etc. They should be kept in constant use and the material should be changed frequently in order to be of greatest interest and benefit to the children.

SCHEDULE AND EMERGENCY SYSTEM

A modern school should have its classrooms equipped with clocks and an adequate system of bells and gongs for assembly, dismissal, and fire control, which together with an

adequate telephone system are necessary elements in the management of large groups of children. Where individual teachers are responsible not only for furnishing their own clocks, but for keeping them regulated, it is inconceivable that school programs can be maintained without a very great loss of time. It is also apt to result in the production of unnecessary disorder by having classes kept standing in hallways waiting for other classes to be dismissed as well as other such irregularities. A program clock which will regulate the bells over the entire building and which may be easily adjusted to a changing schedule is almost a *sine qua non* in the administration of junior and senior high schools where a greater variety of special work is offered, and where several classes must use the same laboratories and equipment. These clocks are almost as valuable in the larger elementary schools where their installation results in freeing the principals from the responsibility of watching the clock and ringing bells at the various periods.

The most rigid standards for the regular, prompt, and habitual or automatic responses to the schedule and emergency signals cannot be too highly developed in every building. It is only through such training that the habitual adherence to schedule can be secured and children taught the value of systematic work, cooperation, and respect for the time and the rights of others.

GENERAL EQUIPMENT FOR CLASSROOMS

The equipment for classrooms will vary greatly with the particular subject which is being taught. In elementary classrooms, a certain amount of standardization can be achieved. This also depends very largely upon the method of instruction.

Strayer and Engelhardt, in their inventory books¹ of both

¹G. D. Strayer and N. L. Engelhardt, *Inventory Book I*, For Elementary Schools Having 12 Classrooms or Less; *Inventory Book II*, For Elementary Schools Having 13 to 20 Classrooms; *Inventory Book III*, For Elementary Schools Having 30 Classrooms; *High School Inventory Book*. Albany, N. Y.: G. F. Williams & Son.

elementary and high schools have included lists of equipment for all types of rooms in such buildings. The equipment which they have discovered to be most frequently used in elementary classrooms is as follows:

aquarium	large dictionary	set of measures
clock	pencil sharpener	supply cabinet
dictionary stand	phonograph	thermometer
filing cabinet	pictures	umbrella stand
flag	pointers	wall maps
globe	projectoscope	waste basket
inkwells	sand table	window stick
knives	scissors	

EQUIPMENT FOR RURAL SCHOOLS

Strayer and Engelhardt, in their score card for village and rural school buildings,¹ have set up the following standards for some of the equipment in such schools:

Seats and desks in classroom. Should be individual, adjustable, and adjusted. Movable chairs are preferable to screwed down seats. No double seats, seating two children, should be installed in any school. For children exceptionally large, the front or back seat of a row should be placed to suit. In all cases pupils should be comfortably seated. Where adjustable desks only are used in one- to four-teacher schools, there should be three sizes, capable of being adjusted as to height of seat and desk.

Teachers' desks. Substantial, attractive, adequate to needs, not mounted on platform. Preferably size 52x32 (approximately) and with body raised from floor to permit of sweeping underneath.

Other equipment. Maps, globes, stereopticon, books, pictures, phonograph, etc. Suitable boards cut to fit tops of desks, making tables for school or community exhibits, dinners, etc.

Playroom. Basement space of classroom size or greater. For buildings of three or more rooms, two playrooms should be provided, one each for boys and girls. Movable

¹Score Card for Village and Rural School Buildings of Four Teachers or Less. New York: Bureau of Publications, Teachers College, Columbia University.



Guilbert & Buell, architects

FIG. 17. Seaford, Delaware, is the site of this well-built one-teacher school

furniture in classroom, when moved aside, may provide play space for smaller children.

Community room. In case of one-teacher buildings, provided in basement (space otherwise used as a playroom). Must have convenient outside entrance. Classroom and adjoining spaces for library and manual arts may be used for community purposes when movable furniture is installed.

In case of two- to four-teacher building, two classrooms may be thrown together by means of sliding or folding doors or larger space may be provided in basement with platform or stage.

Library. Not less than 80 square feet for one-teacher school and increasing in size with the number of teachers and pupils. Book shelves, library tables, and chairs. Well-selected books. Library should be well lighted and attractive. Teacher control either by means of glass partition or screen.

Lunch room. In conjunction with or adjoining domestic science room. Tables, chairs, and provision for serving hot lunches or supplementing children's lunch with hot soup, cocoa, and the like.

School officials' consultation room. General purpose: room to serve as teachers' room, visiting nurses' quarters, for school board meetings, and for private conferences of teachers with pupils, parents, and school officials.

Industrial arts room. With benches, tools, stock rack, and lockers. Teacher control from classroom.

Household arts room. Equipped for teaching cookery and sewing. Teacher control from classroom.

Fuel room. Inside building convenient to heating apparatus. Dustproof and capable of being closed off from classroom or heating room.

Fireproof ash bin. In basement if ash cans are not provided.

Dr. Fannie W. Dunn, in a pamphlet entitled *Educative Equipment for Rural Schools*,¹ has classified all of the equipment essential in such schools. In making this list of equipment, Dr. Dunn has used the following theory:

Where equipment can be collected or made by the children in response to a feeling of need on their part, there is

¹Published by the Bureau of Publications, Teachers College, Columbia University, New York City.



G. D. Strayer and N. L. Engelhardt, educational advisers

FIG. 18. This auditorium in a small community school is used by all the people of the village. Such a community gathering place helps a school in many ways

Coffin and Coffin, architects

usually more educational value to be got out of the making or collecting than there would be from the buying. Expensive toy automobiles, for example, are not nearly so valuable in developing a child's mind and character as those he makes for himself of scraps of tin and wood. From the latter he gets exercise in independence, ingenuity, initiative, and many other worth-while traits; from the former he gets only a painted toy. But with children as with teachers, the cost in time is sometimes out of all proportion to the educational value received. It would not, for example, be wise to force a child to make a penknife do the work of a saw.

There is no mistake greater than the rather common idea that a child's time is of no value. Always, therefore, when a homemade substitute is considered for a piece of bought equipment, the important question is not, "How much money will be saved?" but "Is the educational value from making it worth the time it costs?"

Dr. Dunn's equipment is classified under two main headings: *equipment mainly for teachers' use* and *equipment mainly for children's use*. The latter is subdivided into: materials for construction; materials for enjoyment; materials for problem solving; materials for gaining skills; and games. Under each of these heads there are listed in this pamphlet both the materials that may be bought and the places and prices of the same, as well as home-found substitutes where substitutes are possible. Dr. Dunn's attitude toward the list which she has provided is summarized as follows:

Anyone who knows the typical barrenness of the rural school is likely to consider the equipment suggestions of the preceding pages as extravagant or impossible. They are probably neither. They omit many articles frequently found in city schools and sometimes in rural schools, such as a typewriter, a stereopticon or projectoscope, stereoscopes, a moving picture projector, and others, all of which perhaps ought to be in the county superintendent's office for transportation from school to school, if not in every individual school. Any teacher who is capable of seeing that her pupils make profitable use of it is entirely within reason in asking for anything mentioned in these pages. It would, of course, be foolish to put all this equipment in

charge of a teacher so ignorant and careless that she would let it get broken, lost, or out of order from disuse. Suitable storage closets, cabinets, etc., would be required to take proper care of it, and the children would need to be taught to assume responsibility in using and caring for it. All these things are granted. But does granting them mean that the material should not be provided, or that some other conditions of the school badly need changing?

THE PROBLEM OF LIGHTING

THE NATURAL LIGHTING OF CLASSROOMS. The natural lighting of schoolrooms is perhaps the most important single item and for this reason stress is laid on the proper placing of the building upon the site (see p. 480). Quantity and quality of light vary with the points of the compass, with surrounding buildings, and with latitude and climate.

Windows should be located only on the long side of the room with desks placed so that the illumination will be from the left. The glass area should be one-fifth to one-fourth of the area of the floor—determined by the factors mentioned in the preceding paragraph. Obviously, classrooms facing the north will require a greater glass area and those in sunny climates will require less than rooms located in climates which are subject to fog and smoke. The use of steel sash, because of the narrow divisions between panes of glass, greatly increases the amount of light for a given size of opening. The top of all windows should be square and close to the ceiling. The distance from the floor may vary slightly with the age of pupils but should be not less than 2 feet 6 inches nor more than 3 feet 6 inches, the prime considerations being to have the light high enough to prevent glare and low enough to permit the child to look outside for periods of eye relaxation. The front window in the room should be about on a line with the front row of seats, leaving a dead wall space of from five to seven feet. The rear window should extend to the line formed by the rear row of seats while the piers between windows should never exceed twelve inches. The panes of glass

should be small, as a matter of economy in replacing break-ages, and to give strength to the sash by the use of additional cross members.

Many school buildings are now being equipped with a type of window which permits swinging the upper or lower sash outward. Sometimes they are connected so that they operate together. Another arrangement is the counterbalanced type in which the upper sash lowers when the lower sash is raised. There is still, however, a marked preference for the old style two-sash window which may be raised or lowered at the will of the teacher. The best combination is the wooden sash which may be raised, but is constructed so that it may be swung also. Two factors in the consideration of windows are vitally important: They should be well constructed and should be kept in easy working order as a guarantee of ventilation by fresh outside air whenever desired.

PROVIDING WINDOW SHADES FOR CLASSROOMS. Window shades should be translucent since their function is to diffuse what would otherwise be an excess of sunlight. If the room must be darkened, an additional set of opaque shades should be provided. The best material is a cloth with a rough surface, of light cotton canvas, or of canvas containing no starch, paint, or filler, and dyed to the desired color. The shades should be adjustable and should be hung from the center of the windows in order to assure ease of operation when windows are open.

The teacher must take the responsibility of seeing that shades are properly adjusted to meet the varying light conditions during the school day. Her responsibility is increased by the number of hours of direct sunlight entering the classroom. It has been found that if a classroom faces the northeast, the sun will fall directly on the top of a pupil's desk 165 hours per year. We may call this "desk hours of sunlight interference." If the room faces the east the number is 1,336, to the southeast, 2,485, to the south, 2,885, to the southwest, 2,190, and to the west, 828. These figures show the relative importance of care in use of shades in rooms fac-

ing in various directions. Obviously, if a room faces the north-east there will be little light interference as well as little sunshine. If the room faces the east, it will be flooded by sunlight before school begins and will require the use of shades for about an hour during the middle of the morning. After eleven o'clock the shades should be kept raised.

THE ARTIFICIAL LIGHTING OF CLASSROOMS. Provision for artificial lighting is an important element in the planning of school buildings. The amount and arrangement of lighting facilities have a direct bearing not only on the efficiency of school work but on the health of children in attendance. Even if adequate provision for natural lighting has been made, there will be dark days when artificial lighting is needed, and in case the natural lighting is insufficient, artificial light must be used continuously throughout the school day. Artificial lighting is necessary in order to permit of proper cleaning of buildings after school hours. In the absence of artificial light, the proper standards of cleanliness and sanitation will not as a rule prevail.

In the purchase of lighting fixtures, special attention should be paid to the possibility of rapid cleaning. Lighting fixtures which hide the source of light from the human eye and which permit the light to travel in a semi-indirect manner from the source of supply to the point of need will be found most satisfactory. In every schoolhouse, teachers, principals, and janitors should bear in mind that providing the electric wiring in a schoolhouse brings no return unless the electric bulbs are satisfactory. A good principle to follow is this: Have a sound bulb in each socket every hour of the school day. If this rule is observed, the intentions of the original planners of the school building will be carried out with respect to the adequacy of light for children when they need it.

VENTILATION AND HEATING OF CLASSROOMS

Regardless of the fact that many school buildings are equipped with modern heat control and ventilation devices,

the burden and responsibility of maintaining a comfortable atmosphere in the room rest with the individual teacher. For this reason she should be thoroughly familiar with the scientific facts regarding heating and ventilating and should be able to manage the equipment with which her room may be furnished so as to produce a maximum of efficiency on the part of her pupils. There has been great progress in this field and, fortunately, a progress which combines simplicity with scientific common sense.

From the time that the discovery of the composition of the air was made one hundred and fifty years ago until comparatively recent years, the explanation of the physiological effects of air in crowded rooms was laid to the decrease of oxygen and increased quantity of carbon dioxide. Later, a theory was developed based on the conception that the injurious effects were a result of poisonous organic substances in the air which were thrown off from the lungs. Still later, an abundance of scientific evidence was put forth showing that neither of these two was the important factor but rather the physical properties of the air, that is, temperature, relative humidity, and movement.

THE THREE THEORIES. These three theories—the carbon dioxide theory, the theory of toxic organic substances, and the thermal theory—will be discussed briefly as a background for the specific recommendations on heating which will be made later on.

In spite of the fact that the presence of carbon dioxide in the amounts to be found in very crowded rooms was proved to be harmless more than sixty years ago, this theory has a great influence on ventilation today. It has been the direct cause of the installation of millions of dollars' worth of equipment, much of which is unused and much more of which is useless. It may be stated at the outset that carbon dioxide is not poisonous. It does not support life, that is, it does not combine with the blood as does oxygen to produce the chemical changes necessary for cell growth. It may even be injected into animals without harmful results. In outside air,



FIG. 19. To economize in space the gymnasium has been built on the auditorium stage in one school, with the result that better lighting and ventilation are secured than in a basement gymnasium

carbon dioxide is present in the proportion of about 4 parts in 10,000. In extremely crowded rooms, this ratio may increase to 100 parts in 10,000, yet science has proven that the human system can easily adapt itself to a concentration of 200 parts in 10,000 and the effects are not distressing until the proportion is 700 parts in 10,000, which is seven times as much as will be found in the most poorly ventilated room with a large crowd.

With these facts in mind, it is interesting to note a statement in a report of the New York State Commission on Ventilation:¹ "All careful investigations have abundantly confirmed the view that change in oxygen and carbon dioxide content are of no practical importance in the everyday problems of ventilation."

The theory that expired air contains poisonous organic substances has had a decided effect upon the design of ventilating systems up to the present time. It was generally assumed that air which was breathed out from the lungs carried germs in such quantities as to endanger the health of individuals in crowded rooms. For this reason, it has been the generally accepted practice to furnish fresh air in each room to the extent of 30 cubic feet per minute for each occupant. This requires complicated and expensive mechanical equipment. Experiments carried on under the most careful scientific conditions have shown conclusively that air is a very poor carrier of disease germs and that practically all diseases are transmitted by direct contact. Authorities now hold the belief that the main objects to be attained in ventilation are not necessarily chemical purity of the air and a uniform, draughtless, summer temperature.

This brings us to a consideration of the third theory of the necessity for ventilation—the thermal theory. Extensive experiments have shown that a person can live and work in a room in which the air is not changed over a long period of time, provided the temperature is kept down and the air is

¹*Ventilation*, Report of the New York State Commission on Ventilation. New York: E. P. Dutton & Co.

in motion. If the air is at rest, the skin becomes surrounded with moist air, the blood vessels in the skin become gorged, and a general feeling of discomfort results which interferes with mental and physical work. The condition is clearly stated by Dr. Flugge who worked on the problem in Breslau:

I would repeat that without doubt symptoms of ill health are observable in crowded rooms and that a bad smelling atmosphere is certainly objectionable to those who are sensitive to it, and that very great importance must be ascribed to the enjoyment of the open air; but I would also make clear the object of these requirements. It is not the chemical composition of the air but the overheating of rooms that has the chief evil influence on health, and for that reason it is the latter that must be combated. Fresh air is desirable for people, not because they then breathe chemically purer air, but because the continual movement of the fresh air facilitates the loss of heat from our bodies and exercises besides a very beneficial influence on our skin.

HEAT STAGNATION. Authorities who know the facts now agree that heat stagnation is the main cause of discomfort in a crowded room. The moisture, stillness, and heat of the atmosphere are the main causes of ill effects. The problem of ventilation, then, becomes one of keeping down the room temperature and keeping the air in motion.

THE IMPORTANCE OF THE THERMOMETER. The New York State Commission on Ventilation has contributed a great deal, in a series of practical experiments, to the support of the above view. They proved that low humidity was not harmful; that vitiated air did not affect the physical condition of individuals provided the temperature was kept down and the air was kept in motion. They showed that the most harmful effects came from high room temperatures and demonstrated that in a room registering only 75 degrees, the harmful effects were an increase in the rate of breathing, a decrease in the amount of physical work that could be done, a bad condition of the mucous membrane of the nose, and a marked increase in bodily temperature and heart rate. The Commission's report is quoted in part at the top of page 502.

It must be emphasized that the avoidance of overheating is the primary essential in all systems of ventilation. Air change, direction of flow, and all other factors are secondary. The most important article of ventilating equipment is the thermometer; and however simple or however complex an apparatus may be installed for air conditioning, a constant and intelligent vigilance in regard to the operation and overheating is the price of health and comfort.

After all this has been said, the teacher should bear in mind that the thermometer is her guide and that she is responsible for the use of it in the ventilation of classrooms.

THE HEATING OF CLASSROOMS. There is no greater neglect, on the part of teachers and school administrators, than that in the control of the temperature in classrooms. This is due largely to the fact that teachers fail to realize the extent to which extremes of temperature interfere with the efficiency of the pupils. One of the most remarkable facts about the human mechanism is its ability to maintain a uniform temperature. Except in the case of serious illness, the bodily temperature varies but slightly from the normal, 98.6 degrees, whether we are at work or play, in the heat of summer or the cold of winter. This automatic control takes place without our knowledge and often contrary to the actual sensation. Since the sensations of heat and cold originate only in the skin and mouth, it is clear that the body may feel hot or cold when the facts are just the opposite. For example, in the case of a chill, the body is usually warmer than normal.

In order to maintain this uniformity of temperature, the human body must generate heat when in a low surrounding temperature and lose heat when in a warmer temperature. Cooling is accomplished by the simple process of evaporation in which heat is absorbed when a liquid changes to a vapor. When the skin secretes perspiration, the resulting evaporation cools the body. If, however, the surrounding air is very moist, there is less evaporation and consequently less cooling. Since about 90 per cent of the loss of body heat is by way of the skin, we must intelligently assist this function.

On a warm day, with a temperature of about 90 degrees, if a person is lightly clothed and sitting still, the delicate arterioles of the skin are extended and there is an abundant secretion of perspiration. If the surrounding air is not too moist, we feel comfortably cool. If the temperature drops, the capillaries in the skin begin to contract and there is a lessened amount of perspiration and a smaller loss of heat. Below 70 degrees perspiration ceases, there is practically no evaporation, and any heat loss is due to radiation. This is the "comfort zone" down to about 67 degrees, wherein the bodily temperature is maintained in balance with a minimum of physiological effort.

Below 66° F. the skin capillaries continue to contract, forcing the blood supply into the internal organs and causing serious congestion. In order to prevent damage to the body, more clothing should be put on before this temperature is reached. When the temperature has fallen to 60° F. the arterioles have contracted to their limit and the organism has no means of further limiting heat loss. In order to prevent an actual drop in temperature, the body must begin to produce its own heat by oxidation. It is this temperature, a few degrees above or below 60° F., that is most dangerous to children in the classroom because the drop may be so gradual that it is not noticed and serious internal congestion may occur before protective measures are taken.

However, low temperatures in classrooms actually cause less damage than high temperatures for the simple reason that pupils and teachers usually put on wraps or school is dismissed. The discomfort is so evident that a remedy is provided. It is a fact that children in the majority of classrooms actually suffer from overheating in the winter. When the room temperature rises above 70° F., the skin becomes gorged, the mucous membrane of the nose and throat is parched, the small bones of the nose are distended, producing a "stuffy" sensation, and the pulse rate increases. With the bulk of the blood in the visceral organs, the brain is not properly supplied and mental laziness results.

Again, in the light of the above discussion, the teacher should appreciate her responsibility in the matter of regulating the classroom temperature. She should habitually watch the room thermometer whether the heat is furnished by an elaborate, automatically controlled system or by a jacketed heater. The former often gets out of adjustment and is usually set for an excessively high temperature, while the latter demands attention to prevent the excessive extremes of temperature.

An important factor in temperature control is air movement. If a person sits in a room in which the temperature is 70° F., he will soon begin to feel uncomfortable if there is no ventilation. The body becomes surrounded with a blanket of moist air which is a poor heat conductor and which prevents cooling by lowering the amount of evaporation. If this air blanket is removed by being carried away in an air current, there is an immediate sensation of comfort even though the room temperature remains unchanged. It is obvious that ventilation and heating are inseparable in fact, as well as in the matter of control.

The teacher, then, should keep in mind the following rule: *Maintain a uniform temperature in the classroom of about 68° F. Keep the air in motion without a direct draft.* This means the religious use of a thermometer, preferably two, in each classroom, with a red danger mark at 70 degrees.

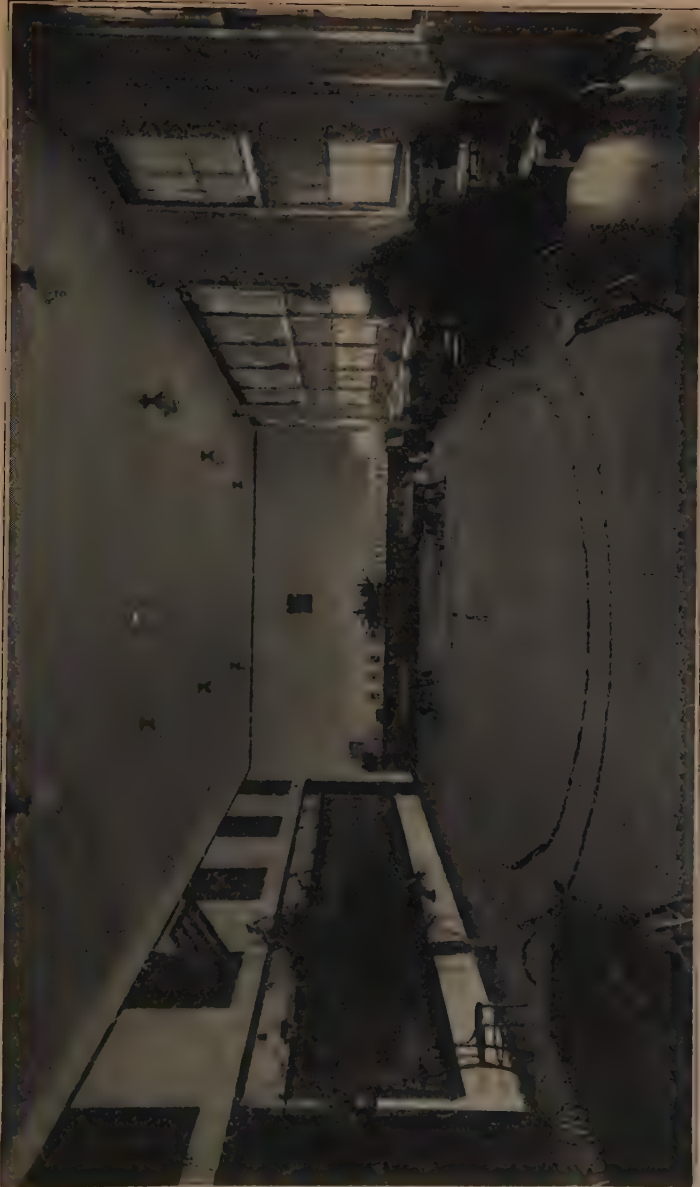
FOUR TYPES OF HEATING IN SMALL SCHOOLS. There are four types of heating employed in the small school with a variation in practice in different sections of the country.

1. The jacket stove is a good heater and has some powers of ventilation if properly installed. It consists of a simple heater surrounded by a metal casing, leaving an air space which is connected with the outside air. Fresh air is drawn into the room, warmed as it passes between the stove and the jacket, rises to the ceiling, and is drawn out by ventilation ducts having an outlet near the floor and terminating in the roof. The jacket stove is effective to a certain degree in the two important factors of air replenishment and air movement

G. D. Streyer and N. L. Engelhardt, educational advisers

FIG. 20. This well planned and splendidly equipped kindergarten room in the Monte Sano School at Augusta, Georgia, shows the progress made in school buildings in the South

Scruggs & Ewing, architects



but it lacks uniformity of operation and should be supplemented by use of window ventilation.

2. The hot air furnace is a distinct improvement over the stove. It may be termed the direct-gravity system. It combines economy of operation and cleanliness not to be found in a building heated with jacketed stoves. Yet the objections to its use are many. During cold weather, there is adequate circulation of air due to the extreme difference in temperature between air inside and outside of the building, but if this difference is not great, the air does not circulate properly and in mild weather the hot air furnace is of no benefit in ventilating. Furthermore, it is impossible to control the flow of hot air in the pipes, with the result that the rooms on the windward side of a building are cold, while those on the opposite side may be overheated. Also, the air entering the room is superheated, its moisture has been baked out, and children in certain parts of the room suffer from being fanned by this hot, dry current. The hot air furnace should be supplemented by judicious use of window ventilation.

3. The direct-natural system can be employed very satisfactorily in small schools and is used extensively in large buildings where the climate is not too severe. It consists of a steam heating system with direct radiation in the rooms, ventilation being accomplished by means of opening the windows. A modification of this type is the direct-indirect type in which air from the outside enters the room at the back of, and through, the radiators. Usually there is an exhaust flue with an opening near the floor which carries off the vitiated air by gravity. That is, air rising in the flue which leads to the roof produces sufficient suction to draw out room air at the floor level. This method of heating may have an automatic control which regulates the flow of steam in the radiators. If such is not the case, the teacher should regulate the temperature by manipulating the radiator shut-off valve and by educating the janitor.

4. The fourth system is a combination of the steam radiator and hot air furnace so far as principle is concerned. It

consists of direct radiation from radiators in the classroom which furnish the necessary heat, while air is circulated by means of fans which draw in air from the outside, heat it to room temperature, or slightly above, and force it into the room through ducts. This is the type which has been most highly developed and extensively used in the greater portion of the country. It is carefully and elaborately designed, with automatic heat control in each room, automatic control of temperature of the air circulated by means of the fan, exhaust ducts, etc. It is expensive to install and expensive to operate. Furthermore, it is often necessary to supplement the ventilation with fresh air from the open window, which often leads to excessive waste.

A modification of this type is the unit ventilation system in which the fan and its heating unit are placed in each room. Heat is furnished by the usual type of radiator but the ventilation is accomplished by means of a small high-speed fan which is placed in a metal-covered box completely enclosing one radiator. Air is carried through the radiator directly from the outside and forced upward by means of the fan, finally being exhausted through a gravity duct located on the opposite side of the room. This type of system may place the responsibility of ventilation directly upon the teacher since she may start and stop the fan at will, as well as supplement the fan ventilation with fresh air from the windows.

The tendency in all modern construction should be to reduce to the lowest degree the cost of ventilating apparatus and to rely for results upon window ventilation supplemented by reasonable safeguards.

The teacher cannot escape the responsibility of correctly regulating the heat and ventilation of her classroom. She must not put too much faith in the automatic regulating devices. The ignorance of many teachers in such matters is indicated by the fact that many think that the thermometer attached to a regulating device is responsible for the heat control. As a matter of fact it has no connection with the heat control mechanism and actually indicates the tempera-

ture of the room, just as all thermometers do. Neither should a teacher rely upon the efficiency of the janitor or custodian. She must learn to use the thermometer intelligently and ventilate the room by fresh air from the windows whenever there is indication that air movement is insufficient. By following these suggestions, she will accomplish more in the day and have healthier and happier children on the morrow.

THE WATER SUPPLY SYSTEM IN SCHOOLS

No one thing is more important for the comfort and welfare of school children than that adequate facilities for drinking and washing be provided. The common drinking cup has been outlawed in most of the states because it has been proved to be a source of contagion. Facilities for washing, especially where children eat their luncheon at school, are of the utmost importance from the standpoint of health of the school children. No child should come in off the playground without having an opportunity to cleanse his hands and refresh himself by washing his face. A drinking fountain of the type which does not permit the pupil to touch his mouth to the source of water supply and a sufficient number of washbowls to make washing a habit for every child every day are not too much to demand. Where any adequate system of heating and a water supply system are installed, hot and cold water should be carried to all washbowls.

GOOD HOUSEKEEPING IN SCHOOL BUILDINGS

Score cards¹ have been developed for the purpose of checking the character of the school housekeeping which is done in any school building. Such a score card will allow teachers to recognize the importance of eliminating any unsatisfactory housekeeping conditions and of keeping school and classrooms at such a point of perfection with respect to house-

¹N. L. Engelhardt, C. E. Reeves, and George F. Womrath, Score Card for Janitorial Service in School Buildings. New York City: Bureau of Publications, Teachers College, Columbia University.



G. D. Streyer and N. L. Engelhardt, educational advisers

FIG. 21. This well-lighted tank which is one of the features of a junior high school in Trenton, New Jersey, provides fine health insurance for pupils.

Ernest Sibley, architect

keeping that the fire hazards in school buildings will be reduced to a minimum.

Mr. W. H. Forster,¹ in his pamphlet entitled "Fire Protection for Schools," states that:

Children should also be required to make thorough inspections of the school buildings, their homes, and possibly churches, libraries, and other public buildings where such inspections can be made.

A part of the duty of a school fire brigade is to make regular periodic inspections of fire hazards, fire-fighting equipment, and egress facilities, and to test apparatus and appliances. Reports of these inspections should be submitted to the principal upon a regular inspection blank.

For educational purposes a daily inspection of this type is a great advantage, as it serves not only to maintain good conditions, but by rotating the inspection work, brings to bear the point of view of many persons and gives these persons very definite education. . . .

Knowledge is the basis of all intelligent action, and where proper protection is afforded, the knowledge of the children as to the value of fire doors, fire walls, automatic sprinklers, and a properly executed fire drill will do much toward preventing panic.

Dr. William T. Melchior,² in his book on "Insuring Public School Property," writes the following:

Inspection by pupils is of particular importance in smaller villages where the inspection by fire departments is limited. If adequate, well-supervised pupil inspection were maintained in all schools, there would be little need for any other but boiler inspection. But such inspection must in no wise lift the responsibility from school authorities, who, in first and last analyses, are responsible.

CLEANING BLACKBOARDS. While blackboard cleaning is more properly the work of a janitor,³ nevertheless the job

¹Prepared and printed for the Department of the Interior, Bureau of Education, Washington, D. C.

²Published by the Bureau of Publications, Teachers College, Columbia University, New York City.

³C. E. Reeves, *An Analysis of Janitor Service in Elementary Schools*. New York City: Bureau of Publications, Teachers College, Columbia University.

often falls to the teacher, particularly in the small school. Even where there is janitor service, the teacher must see that the work is properly done. The surface must be thoroughly cleaned of all dust particles and dried without streaks. This can best be accomplished by the use of a bath towel and clear water. The towel should be rinsed often, folded, and rubbed back and forth horizontally for the best results. After the blackboard is thoroughly washed, it should be wiped with a towel rinsed out and wrung very dry so that no water will run down the surface, causing streaks. The towel must be kept free of dry chalk dust or the results will be unsatisfactory.

Chalk trays should be thoroughly cleaned once a week if covered with the wire mesh and every day if no mesh is used. The best method is to use a damp cloth or sponge rinsed frequently. Follow this with a cloth slightly dampened with kerosene, and dry thoroughly, leaving no chalk streaks.

Cleaning of erasers is often poorly done simply because it takes time and patience unless the school is equipped with a vacuum cleaner. The work should always be done outside of the school building. Thus far, no plan has been discovered which is superior to the old method of beating two erasers together. When beating erasers together more dust can be removed if they are struck partially from the side separating the felt strips so that the dust can escape.

CLEANING THE WINDOWS OF SCHOOL BUILDINGS. Window cleaning is another problem of hygiene which may well be kept in mind by the teacher, both for esthetic reasons and the practical one of better illumination. Few people realize that the inside of windows need more frequent cleaning than the outside. The dust of schoolrooms, rising into air humidified by escaping moisture from radiators and the breath of children, settles on the window panes, producing a coating which is very noticeable within a few weeks. On the outer side, the air is less dusty and damp and the rain tends to keep the panes free of dust. These facts determine the necessity for more frequent washing of windows on the inside than on the outside. In practice, windows should be washed on the

outside at least three times each year and inside once each month. The use of a powdered cleansing agent in water is objectionable because the white dust gathers on the woodwork and contaminates the air of the classroom. The best material is a little kerosene or ammonia in water applied with a cheesecloth and dried with a chamois.

In this connection we should mention the fact that window hangings should be avoided unless there is certainty of excessive illumination. Even then curtains should be of white cotton material, and should be washed every month.

DUSTING WITHIN CLASSROOMS. Dusting is another important cleaning job which is often poorly done or omitted altogether. The dust of a classroom comes from every conceivable section of the community. Settling on desks and books, it is transferred to the membranes of the mouth, nose, and eyes and is often the medium for infecting an entire class. Dust should be kept down to the minimum by prevention and removal. Excessive quantities of dust can be prevented by attention to the following measures:

1. Keep the playground well covered with clean gravel.
2. Keep the furnace room doors tightly closed. In the case of stoves in the classroom, exercise care in the removal of ashes.
3. Provide foot scrapers and door mats at all entrances and insist that all children use them.
4. Fresh air should be admitted to the room at a level high enough to insure its purity. This level will vary with communities. Furthermore, the air chamber should be free of accumulations of rubbish and dirt.
5. Where possible, install a central vacuum cleaning system. If electric current is available, such an installation should be included in every school, rural and urban, large and small.
6. If there is no vacuum system, oil may be used on the floor as suggested in a previous section. If necessary, a sweeping compound may be used.

Even when all of the above suggestions are followed, dusting is necessary and should be carefully and systematically



Starrett & Van Vleet, architects

FIG. 22. Edgemont School, Montclair, New Jersey, is one of the many new schools in which architectural effect as well as educational needs has been taken into consideration

done. Desks and other furniture should be dusted daily, preferably just before children enter the room in the morning. If the room is dusted just after sweeping, the particles still in the air will settle and necessitate repeating the work if the desks are to be clean. Woodwork should be dusted thoroughly once each week, and oftener in especially dirty sections of the city. Walls and ceilings should be dusted at least three times per year and in many instances as often as once each month. At the same time, window shades and pictures should be taken down and carefully dusted.

Feather dusters should never be used as they merely stir up the dust particles which collect in other parts of the room. The best dusting equipment is a manufactured cord duster or cheesecloth or cotton flannel cloth. Regardless of which type is used, the duster should be slightly moistened with furniture polish and left to dry before using.

Radiators and bookcases should be constructed so as to permit sweeping underneath with the floor brush, or with no space below. Dust and trash should be removed daily.

The desk is more nearly the property of the individual child than any other part of the school equipment. As a fundamental of good housekeeping, he should be taught a definite responsibility in taking care of his desk. It should be kept free from scratches, and clean inside and out. The wise teacher will inaugurate a system of desk inspection which will guarantee that the book space is kept clean, with no accumulation of unnecessary material, and with the books always in order. In this connection the raise-top type is particularly desirable. Once each week the children should remove all books and clear out waste material. At least once each month the janitor should be required to wash the desk and wipe out the book space with a slightly dampened cloth.

CARE OF FLOORS. In applying oil to floors, care must be taken to prevent the excessive collection around desk legs. For this reason the mop should not be dipped in oil but instead the oil should be applied to the mop with a water sprinkler. The operator must then see that the oil is applied

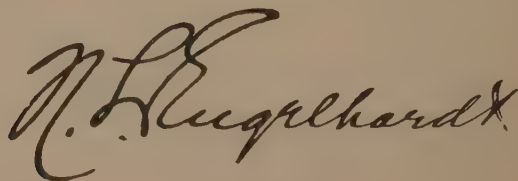


FIG. 23. The gymnasium of Weaver High School, Hartford, Connecticut, is one of which a school in any community might justly be proud. It is airy, light, and roomy, and its equipment is all that can be desired.

where most needed—in the aisles and directly under the desks, where the wear is greatest. Several days should elapse before newly oiled floors are used. Floors should be swept with a long-handled, 12-inch Russia-bristle brush. If sweeping compounds are used, they must be applied so as to prevent collection in cracks and corners of the desk legs and floor, and absorption of too much oil by the floors.

Every floor should be thoroughly scrubbed twice each year with a stiff brush and good washing powder. Bleaching chemicals should never be used because of the injurious effects on the wood. In scrubbing, excess water should be wiped up at once and the floor permitted to dry at least 24 hours, and longer in damp weather. When the floors are dry they should be treated with oil as in the original treatment (see p. 473), except that less oil will be needed and there will be great danger of leaving too much on the surface—the main objection to the use of oil. Experiments have proved that rooms in which the floors are oiled have only one-fourth as many bacteria in the air as rooms with unoiled floors. During the process of sweeping, the air in unoiled rooms contains twelve times as many bacteria as the rooms having oiled floors.

CONCLUSION. In this section an effort has been made to point out some of the most important physical factors which have vital bearing upon classroom teaching. Modern educational research will gradually tend to change some of the recommendations and suggestions made herein. The progressive teacher is constantly alert to this research program which is being advanced by the profession. In this way only will classroom practice reap the benefits of the knowledge and facts which research has disclosed.

A handwritten signature in dark ink, reading "N. L. Hughes" with a stylized flourish at the end.

STANDARDIZATION OF RURAL SCHOOLS



By

GEORGE A. WORKS, Ed.D.
Professor of Rural Education
Cornell University

STANDARDIZATION OF RURAL SCHOOLS

PROVIDING and maintaining adequate school facilities in rural communities is for a large portion of the country a difficult problem. The data gathered through state and county surveys of schools show very definitely that as a group rural schools are below the standards of urban schools in the same territory. These deficiencies are frequently of such character as to work to the distinct disadvantage of country boys and girls. The data that have been collected show that the teachers of the country schools are below the standards of city-school teachers in maturity, experience, and preparation. These are factors that contribute to effective work on the part of teachers.

COMPARISON OF RURAL AND URBAN TEACHERS

In the survey of the public schools of Texas it was found that the median age of women teachers in the one-teacher schools was 22.3 years, whereas in the town and city schools it was 26.3 years. In New York State the median age for teachers in the one-teacher schools was 23.7 years and for village schools 28.5 years. In South Dakota the corresponding figures for rural teachers were 23.17 years and for village schools 26.65 years. When amount of experience is taken as a measure of teaching efficiency, a similar situation is found.

Data from Texas showed that women teachers in one-teacher schools had 3.0 years of experience as contrasted with 5.3 years for the teachers of village and city schools. The Indiana survey showed a median of 3.2 years of experience for one-teacher rural schools and 8.9 for city schools. The figures for South Dakota are: 3.76 years for rural teachers and 4.95 for city teachers. The figures for New York are: 3.16 years in one-teacher schools and 6.59 years in village schools. In preparation for their work, data from New York showed that 9.62 per cent of the teachers in one-teacher schools had some normal school training; in villages 48.01 per cent had such training; and in 50 cities of the third class 80.0 per cent possessed some normal school training.

MATERIAL CONDITIONS

The findings with reference to buildings, supplies, equipment, heating and ventilating equipment, lighting, and other factors affecting hygienic conditions all tell the same story that has been pointed out in the case of teachers, viz., that the rural child when compared with the urban child is under a distinct handicap with regard to school facilities. The situation on the material side is stated very effectively in "Desirable Physical Standards of a Good School," a bulletin issued by The Department of Public Instruction in New Jersey:

City schools are, as a rule, well equipped with apparatus for teaching, but rural schools and schools in small towns are not usually so equipped. In plain truth, a one-room school equipped with sufficient apparatus for doing good school work is the exception, not the rule.

Seats that are in good repair and that fit the children, maps for teaching geography, sufficient books for teaching reading, materials to keep young children busy at their seats, usable blackboards—all these cost but little, but they are wanting in many country schools. If these, the tools for daily work, are at hand, the teacher can work advantageously. If they are not at hand she and the children are handicapped in their work. . . .

There are schools in the state where little children are

forced to sit in idleness because there is nothing with which to keep them employed. A few dollars for seat work or busy work, for books, or for simple manual training supplies would keep them usefully and happily occupied.

As has been stated the deficiencies of rural schools in the respects indicated have been brought very much to the fore by the objective measures used in making school surveys (see p. 519). The general situation had been recognized for a number of years before these surveys were undertaken and many efforts have been made by those in positions of authority to correct it.

MEANING OF STANDARDIZATION

One of the devices that has found very general acceptance is the standardization of rural schools. In 1925 the heads of the educational system of 34 states reported that they were using, on a state-wide basis, some scheme of standardization as a means of improving rural schools. In two other states the departments of public instruction were encouraging county superintendents to improve rural school conditions through the use of a list of standards.

"The Improvement of Rural Schools by Standardization" is the title of a pamphlet issued by the United States Bureau of Education. It presents very briefly but completely the principal features of this movement for improvement of rural schools. The following definition is taken from that source and is based on a study of the provisions for school standardization of 34 states:

Standardization is the establishment of a definite level of school attainment through the adoption of certain minimum requirements, authorized either by law or by the chief school administrative head of the state; these requirements relate either to the physical plant or to the management of the school, or to both. Schools that meet the requirements are usually rewarded in one or more of the following ways: By honorary mention in reports of the state departments of education or by receiving tablets, certificates, or money appropriations from the state.

REASONS FOR POOR RURAL SCHOOL
FACILITIES

The question may be fairly raised as to why the school facilities in rural communities should be poorer than those of cities. In many instances the lack of means with which to make the needed improvements is the answer. Dr. J. E. Butterworth in a study of the buildings and grounds of 1,375 rural school districts in New York State found that in general the schools that scored the lowest on the basis of the standards used were in the poorer districts, and those with the highest scores were in the districts of greatest wealth. The remedy for this phase of the problem lies not alone in standardization, but rather in equitable bases of raising and of apportioning state school funds. The patrons of the school in the poorer district should not be handicapped in their efforts to provide school facilities because of the lack of wealth.

Inability to provide better school buildings was not the only reason for the presence of inadequate school buildings in New York State. Many instances were found in which the wealthier districts of the state had much more meager facilities than were possessed by many of the poorer districts. Some of the less wealthy districts had by making exceptional efforts brought their buildings and grounds to a relatively high standard. The high ideals regarding schools possessed by the school patrons of these districts were undoubtedly factors that led them to make the effort to bring their schools to these relatively high standards.

The lack of these ideals or standards is undoubtedly an important factor in contributing to the existing disparity between the quality of rural and urban school facilities indicated above. Country people are not indifferent to the kind of schools their children have. In general they are deeply interested in the educational welfare of their children. However, in most portions of the country the rural school and its surroundings have become static at too low a level. The result is that the country dweller has relatively few oppor-

tunities to see unusually good school buildings. He fails to realize how much progress has been made in some progressive communities in the last generation. He lacks standards by which to measure the backwardness of his own district. Dr. J. E. Butterworth in commenting on this phase in the *Rural School Survey of New York State*, said:

Of the 1,438 one-teacher buildings studied, only 6 have a score of 900 or above as indicating a reasonably modern plant. As the farmer drives about he has thus about one chance in 240 of seeing a building that will impress him with the inadequacy of the one in his home district. He gives little attention to the larger buildings that he sees for the reason that he considers such to be beyond his attainment. The suggestion then that his home school is as good as the rest of them is too strong to be resisted. Were he to meet frequently a modern building in a situation similar to his, he would undoubtedly be stimulated to want something better or at least would have the disquieting feeling that all was not as it should be.¹

In the utilization of standardization as a means of improving rural schools both of the above mentioned deficiencies are recognized. The lack of ability is overcome in some states, in a measure at least, by grants of money from the state treasury when a district attains standards set up by the legislature or by the state department of education. In general these grants are available to rich and poor districts under the same conditions. The result is that a poor district has to make much greater effort to obtain the assistance of the state than does its wealthy neighbor.

METHODS OF STANDARDIZATION

Standardization as commonly conducted is much more largely a means of educating people to certain factors that make for good schools than it is a means of equalizing the burdens borne by districts in attaining the desirable standards.

¹ "Buildings and Grounds," *Rural School Survey of New York State*, p. 116. Ithaca, N. Y.: Joint Committee on Rural Schools.

Those responsible for the work of standardization in a state prepare a set of standards that are stated more or less objectively. Frequently these standards are formulated as a score card with a certain number of points attached to features that make for good schools. These score cards as issued by different states vary considerably in form, in weight attached to different items, and in items included, but the essential characteristics are shown in the one used in Vermont (see pp. 525-28). The Strayer-Engelhardt Score Card for Rural School Buildings is reproduced on page 466.

When the standards have been determined upon they are applied to the schools by the state school authorities or by the local school authorities or through the cooperation of both. The schools that attain specified degrees of excellence receive some official designation. A note on the Vermont score card shows two groups—standard and superior—for that state. Several other states use the same classification. In other cases only one class, viz., standard, is used. A number of states use the terms first class, second class, etc.

Attention has been directed to the fact that in a few states the attainment of specified standards by a local district brings it financial aid from the state treasury. More common methods of recognizing the achievement on the part of the local district are for the state school authorities to mention the schools in their reports, to issue a marker or doorplate, or to grant a certificate.

To this point the discussion has been concerned primarily with the efforts made by state authorities to improve rural schools through standardization. Capable teachers frequently bring about marked improvement in school conditions quite independently of the stimulus of standardization procedures. Many a rural community under the influence of a competent teacher of vision has been stimulated to transform its rural school. A statement of the principal factors that are generally accepted requirements may be a means of helping other teachers to guide communities to higher conceptions of what constitutes a good school.

OFFICIAL RATING SHEET
FOR
VERMONT RURAL SCHOOLS
FORM B

To be filled out and sent to the Commissioner of Education by the Superintendent after visit and inspection.
A tentative rating should be made in the fall; the official rating will be made as soon thereafter as possible.

Town.....Name of School.....

Number of Pupils.....

Name of Superintendent's District or Town

Date of Scoring by Supt.....Number of Credits.....

Teacher's Name.....

Teaching Address

Home Address

Signed.....
Superintendent

Date of Checking.....Number of Credits.....

.....
For State Department

Possible Score 200 credits.

Required for Standard School the first year at least 150 credits.

Required for Standard School thereafter at least 160 credits.

Required for Superior School at least 180 credits.

All numbers marked * must be made in full, if school is to be eligible for "Standard" or "Superior" rating.

All numbers marked † must be made to at least 50 per cent of each possible score.

A school must meet all legal requirements of the State in order to obtain or retain "Standard" or "Superior" rating.

Read Carefully All Items on All Four Pages.

TABLE I

PART I

Credits	Allowed	PLANT AND COMMUNITY (At least 70 credits for first year and 75 for subsequent years for Standard, and 85 for Superior School required for Part I)
By Supt.	By State Dept.	
		I. BUILDING AND GROUNDS (4) 1. APPEARANCE—Neat and attractive, exterior and interior of building. School grounds neat and well cared for with shade trees planted. (6) 2. GENERAL REPAIR—Good foundation, smooth tight floors (2); no leaks, suitably painted (1); all windows and doors with locks in good working order (1); fully screened from flies (2). 3. LIGHTING (5) * a. Light admitted only from the left or left and rear of pupils (5). (5) † b. Glass area at least one-fifth of floor area (3); windows with <i>adjustable</i> shades in good condition (2); with shades running from bottom rollers (1). (8) * 4. HEATING AND VENTILATION—Ventilating heater or satisfactory jacketed stove, with adequate fresh air inlet and foul air outlet, or furnace, with window boards used in at least four windows. (5) * 5. CLEANLINESS—Swept and dusted in a sanitary manner after school hours, daily when needed, and at least twice a week, with dustbane, dampened or oiled sawdust or oil spray used, or floor oiled (3); a thorough housecleaning at least once a year (1); clean windows, watertank, hand basin, etc.; tidy closets, shelves, tables, desks, etc. (1). (10) † 6. OUT-BUILDINGS—Two completely fly-screened sanitary dry closets at least twenty feet from the school building and one foot or more apart (1); connected with the schoolroom by a well ventilated and lighted divided passage-way having a good roof and floor, entered only from the schoolroom and leading to separate closets for the sexes (4); or sanitary chemical or flush closets (5); closets carefully supervised, neither marked nor soiled (1); well ventilated and regularly disinfected (2); fuel house convenient and in good repair and separate from girls' toilet (2). (43) II. EQUIPMENT (8) 1. FURNITURE—Tables and chairs of three sizes or chair desks of three sizes or single adjustable desks or desks of three sizes to fit all pupils. When new ones are bought they must be chairs and tables of three sizes or single adjustable desks or chair desks. Tables and chairs or chair desks, or single adjustable desks, all of proper sizes, are required for Superior rating (5); Teacher's desk with drawer that can be locked, and two good chairs, reading table, recitation chairs, case or shelves for books, protected shelves for lunch boxes, bulletin board (3). (4) * 2. BLACKBOARDS—At least sixteen linear feet not less than three feet wide in good condition, with one or more sections not more than twenty-six inches from the floor. When new boards are installed one section of six feet in length twenty-four inches from floor is advised. (5) * 3. TEXTBOOKS—Modern, in good condition, in quantity to supply the needs of every pupil. (8) † 4. SUPPLEMENTARY BOOKS AND SUPPLIES—Covered wall maps of the World, United States, Vermont, a globe, a large up-to-date dictionary and several small ones (2); a library of at least ten books, with five new ones added each year, to be selected from the list of approved books for Rural School Libraries (2); at least two sets of supplementary readers for each grade (1); at least three kinds of primary material (1); use of traveling school library (2). (2) * 5. DRINKING ARRANGEMENTS—Covered tank with faucet, regularly and frequently cleansed, and individual drinking cups properly cared for, or satisfactory drinking fountain. (2) * 6. FLAG—A flag flying outside and one not smaller than two by three feet displayed inside at all times when school is in session. (4) † 7. APPARATUS FOR ORGANIZED PLAY—Outdoor equipment such as beanbags, teeters, swings, ropes and rings, basket ball, tether-ball, volley ball and indoor games. Some of both kinds required for two credits. (4) 8. MISCELLANEOUS—Clock, first-aid outfit, thermometer, individual towels used, wash basin, liquid soap or soap powder used from container, mirror, wastebasket, pencil sharpener, shoecraper or flexible wire mat, or cocoa doormat, etc. (37) III. COMMUNITY (4) 1. SALARY—Minimum salary of \$25 per week (4); \$22 to \$25 per week (3); \$20 to \$22 per week (2); below \$20 no credit. (3) * 2. LIVING CONDITIONS FOR TEACHER—The community must provide suitable living conditions for the teacher. (4) 3. RETAINING TEACHER—Same teacher retained in the same school for more than three consecutive terms. A school that has kept the same teacher for two or more years may retain credits on this item under a different teacher for the next year.

TABLE I—Cont'd

Credits Allowed		PLANT AND COMMUNITY (At least 70 credits for first year and 75 for subsequent years for Standard, and 85 for Superior School required for Part I)
By Supt.	By State Dept.	
		(4) 4. MEETINGS, FAIRS, EXHIBITS, ETC.—Parent-Teacher or other Associations giving definite community support to general welfare, health work, Boys' and Girls' Clubs, exhibits, improvement of school building and equipment, attendance of pupils, etc.
		(5) 5. SPECIAL POINTS OF MERIT—Hot lunches at noon, two extra thorough housecleanings; stereopticon and approved slides; or radioscope; or stereoscope and approved stereographs; phonograph and six or more approved records; suitable pictures and decorations; garden, school kept thirty-six or more weeks; other desirable community work; distinctly superior plant, etc.
		(100)
PART II		
Credits Allowed		TEACHER AND PUPILS (At least 70 credits for first year and 75 for subsequent years for Standard, and 85 for Superior School required for Part II)
By Supt.	By State Dept.	
		IV. TEACHER-TRAINING
		(12) Completion of four years of high school and two years additional teacher training (12); of four years of high school and one year additional teacher training, or of three years of high school and two years additional teacher training (10); of three years of high school and one year additional teacher training (8); or holding qualification or new life certificate without teacher training (6).
		V. EXPERIENCE
		(8) Four years (equals 34 weeks each) or more of successful experience (8); from three to four years (6); from two to three years (5); from 24 weeks to two years (4).
		VI. EFFICIENCY
		(32) † Good school management (2); register and other records well kept and up to date (1); well-planned school program, showing study periods as well as recitations, posted at all times in conspicuous place, and regularly followed (1); definite daily preparation resulting in well organized teaching and definite results (3); seat work for small children constructive and of educational value, no child sitting idle (1); methods modern and well used (2); extra outside time systematically given to help weaker pupils (2); individual differences considered in assigning lessons (1); teacher or adult supervision during noon hour (2); teacher regularly at school at least twenty minutes before opening hour (1); frequent drills and reviews on fundamentals (3); pupils graded and taught according to state course of study (2); well-conducted health program (1); careful attention at all times to proper lighting, heating, ventilation and cleanliness of school-room (2); clear, full, detailed assignment of lessons (not page or list type) (2); building, grounds and equipment well cared for and supervised (2); play supervised or directed by teacher (1); neat attractive personal appearance (1); pleasing voice and cheerful manner (1); loyalty to profession and school officials (1).
		VII. PROFESSIONAL SPIRIT
		(10) Attendance at State and district educational meetings (2); take and use at least one standard educational journal (2); read at least two professional books each year selected from State List or approved by superintendent, with application to daily work (2); attendance at summer school three times during last five years (4); or twice during last five years (2); or once during last three years (1).
		VIII. RESULTS AND PUPILS
		(26) REQUIRED ATTENDANCE—An average of not less than ninety per cent for the two terms last completed before the date of checking by State Department (4); or of eighty-five to ninety per cent (2).
		APPEARANCE AND CONDUCT—Neat, clean, orderly, polite, industrious and profitably employed (10).
		RESPONSIBILITY AND COOPERATION—Pupils showing personal interest and participation in welfare of the school (4); practicing good citizenship in daily activities (4).
		PROGRESS—Progress and promotions satisfactory as shown by standard tests (4).
		IX. RELATION TO COMMUNITY
		(12) Cooperation with parents (1); homes systematically visited (3); acting as a leader in community (1); a majority of parents visiting school (average twice a year) (1); school building made community center (1); hot lunches at noon (1); active work with parent-teacher or similar organization (2); two week-ends spent in community each month with outdoor walks, sports, activities and other desirable out-of-school work (2).
		(100)

STANDARDIZATION OF THE RURAL SCHOOLS OF VERMONT

I. PURPOSE

To improve every rural school through better buildings, better equipment, better teaching, and definite community cooperation, name plates will be issued by the State Commissioner of Education to all schools which receive the required rating on this Rating Sheet. Only those things which are necessary to a good school are required. Essentials rather than minor details will determine the rating, but the school must be a good one. All points having to do with sanitation have been made to comply with the regulations of the State Board of Health.

II. PLAN

NAME PLATES—The Superintendent will furnish to every rural teacher, school clerk, and member of school board in his district, a copy of this Rating Sheet, at the opening of the school year. The teacher should score with a pencil each number on the sheet previous to the Superintendent's visit, and submit it to him for revision or approval. The Superintendent will then check up the marks and complete the scoring. ALL SCHOOLS ARE TO BE RATED, EVEN IF THEY ARE NOT UP TO STANDARD. To all schools whose Rating Sheet shows a total score of 150* or more credits as rated by the Superintendent with the assistance of the teacher, and WHEN APPROVED BY THE STATE DEPARTMENT, one of two name plates will be awarded by the State Commissioner of Education.

III. STANDARD SCHOOL

A name plate bearing the words "STANDARD SCHOOL" will be awarded to those schools scoring on the Rating Sheet between 150 and 179, inclusive. To become a Standard School all the forces of the community should work together. The school board, the teachers, the pupils, and the patrons of the school have each a share in the work of improving the school. Every community found to be actively engaged in working for a good school deserves honorable mention, even though a name plate cannot be obtained at the time.

IV. SUPERIOR SCHOOL

There is a laudable desire on the part of many school officials to make their schools as nearly perfect as possible. To encourage this a name plate bearing the words "SUPERIOR SCHOOL" will be awarded to schools rating 180 or above on the Rating Sheet. A Superior School is one that is taught by a teacher of superior qualifications and with the highest efficiency; in a schoolhouse as nearly perfect in all essentials as possible and furnished with everything needed. The community must show the interest that the claim of such a school implies.

V. RETAINING THE NAME PLATE

Standardized schools will be rated once a year. The approved lists of all "STANDARD" or "SUPERIOR" schools will be kept on file in the office of the State Commissioner of Education. If it is found on later inspection by the Superintendent, or the State Department, that a school no longer meets the requirements for standardization, conditions must be improved without delay, or the name plate will be removed. Every school should try not only to secure and retain the name plate, but also to have a finer and better school from year to year.

VI. STATE AID

The State Board has available a sum of \$30,000 to help in this work. To secure State Aid the school should first make application and state its plan for standardization. If these plans are approved by the Commissioner, the State will pay one-third of the cost of approved repairs and approved equipment for the school, with the provision that not more than \$300 of State Aid from this fund shall be given in any one year to any one town for one school; \$500 for two schools; and \$100 more for each additional school. Send for special bulletin on State Aid. This State and local money must be spent either for approved repairs or to buy approved permanent furniture and equipment as described under I-4, II-1, 4, 5, 7, and 8.

VII. USE OF RATING SHEET FOR SCHOOL IMPROVEMENT

This sheet may be used to check up the school, its work and its improvement as follows:

Mark each sub-item for which full credit is allowed with heavy black check mark or star.

Mark each sub-item which is not given full credit with red pencil. When credit is earned, leave red mark and add heavy black check or star.

Preserve rating sheets and note improvement year by year.

*After the first year 160 points are necessary.

IMPORTANT ITEMS IN A STANDARD SCHOOL

Miss Edith A. Lathrop as a result of the study¹ of the score cards used for standardization of schools in 30 states found nine items that were included on at least one-half of them. They were: site, building, lighting, heating and ventilation, equipment, teacher, organization, hygiene of the school plant, and community attitude.

THE SITE

Area and ornamentation are the two elements most commonly included in connection with the site. There is great variation in what is considered to be a desirable size. In New Jersey the suggestion is made that "one acre is the minimum size and that from two to five acres is a desirable size." Dr. Butterworth² suggests that an acre should be regarded as the minimum for the one-teacher school. This is based on a consideration of the space needed for the location of the schoolhouse, ornamental planting, and for play purposes. He found that nearly one-half of the several hundred one-teacher schools studied in New York State had approximately one quarter of an acre or less. This is undoubtedly fairly representative of conditions to be found in older communities in which the school grounds were laid out when there was little or no recognition of the importance of play in the educational development of the child.

Even now many rural communities are not appreciative of the importance of providing ample space for the free play of school children. After school sites are once located and laid out it frequently is difficult to secure a change, although the teacher who knows the importance of play space and who is also a leader frequently secures ample grounds.

¹Edith A. Lathrop, "The Improvement of Rural Schools by Standardization," *Rural School Leaflet No. 32*. Washington, D. C.: Department of Interior, Bureau of Education.

²"Buildings and Grounds," *Rural School Survey of New York State*, p. 62. Ithaca, N. Y.: Joint Committee on Rural Schools.



School grounds that could be greatly improved by some planting

The appearance of the school grounds is much more largely within the control of the teacher than is their size. Too frequently the site apparently has been chosen for a school-house because the land could be used for no other purpose. However, many a site of this character has been changed from a disgrace to the district to an object of community pride. Many of the state departments of education and a number of the land grant colleges issue bulletins giving practical suggestions for the improvement of school grounds.

With material of this kind at hand, what better civic instruction can be given to the pupils than that of making plans for the beautifying of their school grounds? In some phases of the undertaking it may be necessary to enlist the assistance of the adults of the community, but so far as practicable the enterprise should be planned by the pupils. An undertaking of this nature may be made the occasion for teaching pupils much about arrangement and planting of shrubbery, but a still more important outcome should be an attitude of interest in the appearance of the school yard. This interest if aroused and maintained during the school life is certain to

carry over to a greater or less extent into adult life. To the extent to which this result is obtained will it be easier to secure more adequate school grounds in the future.

THE BUILDING

Unfortunately, practically all of the early rural school buildings are unattractive. In many of those erected in recent years there is observable a great deal of improvement. They are not only attractive but are much better adapted to the demands of modern education than the "box car" type.

Quite as important as the exterior appearance of the building is the condition of the interior. The walls and ceiling should be tinted. If paint is used it should have no gloss, as the light reflected will be hard on the eyes of the pupils. If paint is not available alabastine or a similar preparation may be used. There are several color schemes, but two are most commonly suggested. One of these is green and cream. When this is used the walls should be light green, the border and the



An attractive building with a good setting

ceiling cream color. The other is tan and cream. With this combination the walls are tan, the border and ceiling a light cream. Either of these combinations is restful to the eye and makes a light, cheerful schoolroom. Wainscoting is not a desirable feature for a schoolhouse. However, if it is present it should be painted brown and combined with either of the suggested colors. The architectural appearance of the school building is not easily changed but the appearance of the interior of many a rural school building could be greatly improved by proper tinting.

The floors of the school building should be made of some such hard wood as maple or oak. Only well-seasoned material should be used and the flooring should be closely laid so that the size of the cracks will be reduced to the minimum. Floors of this kind are readily kept clean and there is little or no trouble from dust when a sweeping compound is used.

LIGHTING

The studies of recent years have put us in very much better position than formerly to provide for a proper amount and arrangement of window space. As a result of these studies the following are the commonly accepted requirements:

1. For the northern part of United States and for Canada the window space should be equal to at least one-fifth of the area of the floor. South of this region the proportion may be slightly decreased but it should not fall below one-sixth. If school buildings are so located that the windows are shaded, the ratio of window surface to floor space should be increased.

2. It is preferable to have light come from one side only—the left. This arrangement prevents the shadow of pen, pencil, or the hand from falling on the paper as the pupil writes. The common arrangement of light from both right and left has a tendency to irritate the eyes. If lighting from one side is not adequate it is better to have it come from the rear than from the right. This arrangement is objectionable however as it requires the teacher to face the light a

great deal of the time. Windows on the front are extremely objectionable as the pupils have then to face the light. It is also undesirable to have windows so far forward on the side walls that the light shines directly into the eyes of the pupils. Windows thus located should have the light shut off by some opaque material.

3. The windows should be provided with translucent shades arranged so that the admission of light can be readily controlled. The shades should be on adjustable rollers or each window should be provided with two shades, one at the bottom and the other in the middle; or, in case of a single shade, it should be attached so as to roll up from the bottom. Such colors as light tan, cream, light buff, etc., are best.

HEATING AND VENTILATION

The Vermont score card indicates the necessity for a ventilating heater, a jacketed stove, or a furnace, so that there may be adequate ventilation and heating of the standardized rural school building. The recognition of the importance of a combined heating and ventilating equipment is shown by the inclusion of it in all but one of the thirty plans for state standardization. When the school is equipped with any one of the heating and ventilating schemes enumerated above, the teacher should make herself thoroughly familiar with its workings.

Directions for the operation of the plants now on the market are issued by the companies manufacturing them. If those for the school in which a teacher finds herself have been lost she should secure another set from the company. Some of the heating and ventilating plants fail to give satisfactory service due to faulty installation. Very frequently, however, the results are not satisfactory because teachers do not know how to operate them.

Butterworth¹ reports 85 per cent of the one-teacher schools

¹"Buildings and Grounds," *Rural School Survey of New York State*, p. 44. Ithaca, N. Y.: Joint Committee on Rural Schools.

studied as having the unjacketed stove. Undoubtedly the majority of teachers in one-teacher schools still have to depend on this means of heating their buildings. They then have the additional problem of providing some means of ventilating the room independently of the heating system. This should be accomplished without permitting drafts on the pupils when they are in their seats. The windows may be lowered a few inches at the top and a slanting board may be placed in front of the opening so that the entering currents of air are deflected upward. In sections of the country having very cold weather this arrangement may not be satisfactory during really severe weather. A fairly satisfactory arrangement for these conditions is to raise the lower sash a little and insert a board four or five inches in width. The sash should then be lowered on the board. This device will permit air to enter between the upper and lower sash in such a manner as to prevent direct drafts on the pupils, which should, of course, be avoided.

Teachers working in school buildings without an adequate heating and ventilating plant will find it necessary to watch closely the condition of the air. They should provide for frequent physical exercises during which the windows and doors should be opened and the room completely flushed. They will be well repaid not only in the physical welfare of the pupils but also in a reduction in disciplinary problems and in better attention on the part of pupils.

EQUIPMENT

PLAYGROUND APPARATUS AND FLAG. Playground equipment and the flag are required for standardized schools in the majority of the states. In many states the legislative provisions require the display of a flag. Regardless of legislation, provision should be made on the school building or on the school grounds for a flagpole. Teachers should have a flag in the school that is in fit condition to display.

All too frequently the country school has no playground

apparatus. Butterworth¹ reports that in New York State 84 per cent of the one-teacher schools and 67.5 per cent of the two-teacher schools studied had no playground apparatus. This condition is undoubtedly largely due to the idea very prevalent in rural communities that country children get enough exercise at home and in going to and from school. Sight is lost of the values of play that do not issue from farm and home work. Every country school should have play apparatus adapted to the needs of both the younger and the older pupils. Pieces of apparatus that are appropriate are: slide or chute, seesaw, swing, giant stride, horizontal bars, flying rings, sand box, bean bags, baseball, bat, and volley ball.

If a teacher finds the board of education unwilling to supply such equipment she should enlist the cooperation of the pupils in gradually providing it. If the school has a parent-teacher association an effort should be made to secure its assistance in providing playground equipment. The purchase of ready-made equipment is the desirable procedure. If this does not seem practicable, a great deal can be done through home-made apparatus.

INDOOR EQUIPMENT. Of the indoor equipment the things most commonly stressed in standardization are pupils' desks, blackboards, dictionary, maps, library, globe, and musical instrument.

Desks. The selection of proper desks and their placement is a matter of great importance in the school. The teacher may not often have an opportunity to influence the selection of desks for the school, but if she does, care should be taken to follow the suggestions given under the physical conditions of the classroom (see p. 520).

The arrangement of the desks is a matter in which the teacher can frequently exercise influence, and there is often very great need for better placement of the seats in rural schools. In the arrangement of stationary desks—and they

¹"Buildings and Grounds," *Rural School Survey of New York State*, p. 62. Ithaca, N. Y.: Joint Committee on Rural Schools.

are by far the most common form in the rural school—frequently desks of different sizes are placed in a row. The smaller desks are placed at the front of the room and the desks increase in size toward the rear. The result is a lack of adjustment in the relation between height of desk and height of seat. The desks of one size should be in a row from front to rear. If adjustable desks are used this is not necessary. If the desks are improperly arranged the teacher should enlist the services of the older pupils or some adult in the community in getting them properly placed.

It is not an uncommon sight to see children in badly cramped positions or sitting in seats so high that their feet cannot touch the floor. Much of this difficulty can be avoided if teachers will exercise more care in making the seating arrangements. If there are no seats low enough so that the feet of the smallest pupils can rest squarely on the floor they should be provided or else the children should be furnished with foot rests. Frequently a cross bar that will meet the purpose can be put under the desk.

Another defect in the arrangement of seats that is likely to be found in country schools is that of the desk and seat being placed too far apart. As a result the child, in order to use the desk, has to move so far forward that his back is left without support. Ordinarily about two inches of space is all that is needed between the pupil's body and the edge of the desk. In cases of this kind of improper arrangement the desks should be reset.

These three defects in desk placement are fairly common in rural schools. They not only make for uneasiness and lack of attention to work on the part of pupils, but they are likely to cause chronic ailments. Physicians report improper arrangement of school desks as contributing to round shoulders, defective vision, curvature of the spine, uneven shoulders, etc.

Fortunately in recent years the tendency has been to use movable school desks. They permit of great freedom on the part of pupils in adapting their positions to the needs of the work, and are conducive to good discipline. They have the

further advantage that the room can be readily cleared of desks when it is used for recreation purposes or for community gatherings.

Of late courses of study have given more consideration to health education than was previously the case. The teacher cannot carry out a program of health instruction and expect to obtain the largest results from it unless the conditions in the school are illustrative of the ideals for which the instruction stands. In many rural schools this is far from being the situation at present. The teachers in many districts may well spend some of their energy in endeavoring to get boards of education and communities to put the schoolhouses and out-buildings in such shape that they may be a helpful adjunct to the classroom instruction in health work.

Blackboards. Ample blackboard space is a valuable asset to the teacher in her work. There should be a blackboard across the entire front of the schoolroom. The side wall should have all the available space occupied with blackboard. It should not, however, be placed between windows because reading from a blackboard when they are looking toward the light causes a very severe strain on the eyes of the pupils. To be most serviceable in the country school the blackboard should have a width of about 42 inches and it should be placed so that the bottom is about 26 inches from the floor. It is not uncommon to find the board placed so high that the younger pupils cannot write on it without great effort. It is easy to remedy this defect by putting a narrow platform below the board.

Teaching equipment. The importance of such teaching equipment as maps, library, globe, and supplementary readers is quite likely to be overlooked in rural communities. Sometimes the teacher who finds she is handicapped in her work because of lack of these materials can interest the board of education in providing them by giving them facts regarding the extent to which they are supplied in other schools. The standards set in the official rating card for Vermont schools should be considered as the very minimum.

THE TEACHER

In the early efforts at standardization no attention was given to the teacher. That there is growing recognition of the importance of the teacher as a factor in determining the character of a school is shown by the mention of the academic and professional qualities of the teacher in 28 of the 30 states in which standardization of schools is practiced. The requirements on this point naturally vary considerably with the states. They commonly include such objective standards as experience, a certain grade of certificate, and attendance at professional meetings. Other requirements frequently stipulated are of such character that while very important it is difficult to get an objective measure of them.

ORGANIZATION

This factor includes average daily attendance, length of term, the presence of a daily program, and the following of the state course of study. Of these factors all except the second are very largely under the control of the teacher. The skillful teacher can create an atmosphere in the school that will influence directly the attendance of pupils. The majority of children can be interested in school to such a degree that they will not voluntarily absent themselves. In the development of this attitude the most potent influence is the realization on the part of the pupils that they are making progress in the mastery of the school tasks. This the majority of them will be able to do when the work of the school is adapted to their abilities and is skillfully presented by the teacher. In addition, the teacher should endeavor to incorporate some element of special interest into each day's program.

In many schools cases of irregularity of attendance due to the influence of the home arise. In such cases it may be necessary to reach the parents directly and in extreme cases it may be necessary to resort to the compulsory attendance act.

There should be in each school a carefully prepared pro-

gram that is so placed as to be easily seen. To prepare a good daily program for the one-teacher school is not an easy task. A great deal of care should be exercised in working out the time allotments for several subjects and in reducing to a minimum the number of extremely short recitation periods. The latter may be accomplished by the combination of classes in some instances and in others by the alternation of subjects. Fortunately suggestive programs for schools are frequently issued by school authorities. These not only will be of assistance in making the permanent program but such a program may be followed while the teacher is becoming more familiar with school conditions than is possible from school records alone (see *Starting the Work of the School Year*, p. 37 of this volume).

The program should make provision not only for recitation periods but for study periods as well. The program when made as a rule should be followed. There is undoubtedly a great deal to be gained from regularity of recitation and study periods on the part of pupils. It would be stupid, however, to follow slavishly even a good program. The special occasions that offer an opportunity to utilize the unexpected for educational ends or to interest the community in the school should not find an ironclad program interfering.

The teacher should have at hand a copy of the state course of study but slavish following of it is not desirable. Especially is this true when the course consists primarily of detailed facts that are to be memorized. The teacher should be constantly endeavoring to adapt the instruction to the needs of the pupils. This will frequently require departure from a stated course of study. The courses of study issued by administrative authorities all too frequently consist of lists of facts to be learned. There is very great need for more emphasis on the objectives to be attained as a result of a given year's work and on the type of experience pupils should have to attain the objectives. Organization, of course, on this basis will greatly increase the responsibility of the teacher but it will give her much larger opportunity for the use of

her initiative than does most of the present practice in course-of-study making.

HYGIENIC CONDITIONS

This heading includes two topics that have already been discussed, viz., the proper seating of pupils with reference to the size of desk and with regard to the lighting arrangements of the room. In addition, drinking facilities and toilets are included by at least one-half the sets of standards. In the case of the former the standard is set at individual drinking cups or sanitary bubblers.

While it is not generally specified in connection with standardized schools, the source of the water supply is an important matter. If there is a well on the school grounds it should be so located that there is no danger of seepage from the out-buildings, and it should be deep enough to escape pollution from drainage water. The distance the well should be from a possible source of pollution varies with the character of the soil. In a clay soil the distance may with safety be less than in a sandy soil. In general the distance should be not less than 100 feet. If it is a dug well it should be closely covered and the ground should slope away from the well.

Even when these precautions are taken it is desirable at the beginning of the school year to make certain that the water is not contaminated before beginning to use it. In most states it is possible for a school district to have a bacteriological examination made of the well water by the state health laboratory with little or no expense. Directions for preparing and sending the sample should be obtained from the laboratory. Frequently the water for school use is brought from a neighboring farmhouse, or occasionally from a spring. When this is the practice the same precautions should be observed as are suggested in connection with the school well. Water should not be used from springs so located that the surface water runs into them or from springs that are subject to pollution by animals.

In the matter of toilets, at least two are required. Usually any one of several types may be chosen but certain ones are frequently given additional weight as is indicated in the Vermont standards. The primary considerations are cleanliness and privacy. In the case of the former it is not always easily controlled when the toilets are located outside the schoolhouse, as is the condition in the majority of rural schools. This difficulty does not excuse the teacher from making an effort to see that the board of education has the toilets put in shape at the beginning of the school year and as frequently thereafter as necessary. She should also endeavor to develop in the pupils the proper attitude toward keeping the toilets, as well as other school property, in good condition. The care of school grounds and building furnishes an excellent opportunity to teach certain desirable civic attitudes.

COMMUNITY RELATIONS

The custom of former days by which the teacher "boarded around" now seems absurd. It did, however, have certain distinct advantages. The teacher had the opportunity to learn conditions in the homes from which the pupils came. These visits offered the opportunity for learning what advantages and what handicaps the individual members of the school had as a result of home conditions. They afforded the occasion for a very natural approach to a consideration of such school problems as regularity of attendance, discipline, progress of the children, and the school's material needs. In turn the teacher learned of the home and community problems. These exchanges of views were likely to result in the formation of a bond of sympathetic understanding between school and home, between teacher and community.

This relationship is so important not only from the viewpoint of individual pupils and homes but also from the angle of the community's attitude toward the school as an institution that it should not be allowed to die out. In nearly all rural communities the school is primarily dependent on funds

from local sources for its maintenance. There are thousands of rural schools in which conditions could be very materially improved by increased funds, and these funds would be forthcoming if the taxpayers were only aroused to the needs of the school. The farmer believes in the education of his children and is willing to support schools, but his education to the needs of the school must be a continuous process. Especially is this important when a large share of responsibility for the schools is borne locally.

The rural school teacher, because of the conditions under which she works, bears a very intimate relationship to the problem of community interest in the school. In the cities and villages the compactness of the population and the presence of a principal or superintendent make it natural for him to assume this responsibility. This condition also makes it relatively easy for him to discharge the responsibility. The country population is scattered, the number of communities a superintendent has in his territory is large, and as a result he is not in position to deal with the development of interest in the school as is the town or village superintendent. The rural teacher as a consequence of her more or less continuous presence in the district is in position to make a material contribution to the development of this desirable attitude and should make the most of it.

To develop and maintain a sympathetic understanding between school and community as well as between teacher and parent is one of the large opportunities as well as one of the duties of the rural teacher. The teacher with vision who has a willingness to work will devise the means best adapted to attaining this end in the community in which she serves. Some of the devices that have proved helpful are the parent-teacher associations, school fairs, school exhibits, visiting days, play festivals, boys' and girls' clubs, and singing schools. The teacher has to take into consideration her own talents as well as community resources in determining the means which she will use to make her school an integral part of the life of the community.

OTHER ITEMS TO BE CONSIDERED

Site, building, lighting, heating and ventilation, equipment, teacher, hygiene of school plant, and community relations are factors considered in half or more of the thirty states in which school standardization is used as a means of rural school improvement. These elements should not be considered the only significant ones in developing adequate rural school facilities. They are the ones that have appealed to those responsible for the development of standardization schemes as being the most significant.

Important factors that have not been included in standardization schemes or are mentioned in less than one half of them are: amount of air space per pupil, pictures, punctuality, school spirit, physical fitness of the teacher, kindergarten table and chairs, basic and supplementary texts, thermometer, primary equipment, etc.

Of the important conditions affecting the standardization of schools some are impossible or difficult for the teacher to modify. These include the choice of a school site and the principal architectural features of the school building. In other instances the influence of a teacher with vision may bring almost complete transformation. They are such factors as the ornamentation of the school grounds, the interior decoration, playground apparatus, school equipment, attendance and neatness of pupils, and attitude of community toward the school.

RESULTS OF SCHOOL STANDARDIZATION

Reports made by school authorities indicate that they believe that the movement has resulted in a marked improvement in rural school conditions in many communities. It has been a means of putting before the layman as well as the school official certain definite suggestions for school betterment. It has also undoubtedly been a means of stimulating the development of local pride in the school. It is a device by

which a community can measure certain aspects of its school in terms of recognized standards.

Teachers working in states or provinces in which standardization is not fostered by the state or provincial school authorities may use such standards as have been suggested here. The wise use of these standards by teachers may be a means of improving the school conditions of the communities in which they teach. Additional information on rural school standards will be found in the section, *Modern School Buildings and Their Management*, page 447.

BIBLIOGRAPHY

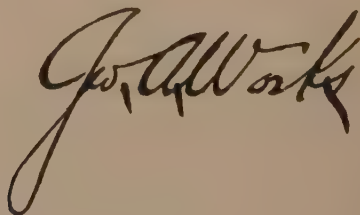
BUTTERWORTH, JULIAN E. "Improving the School Building Facilities of One- and Two-Teacher Districts Through Measurement," *Extension Bulletin No. 52*. Ithaca, N. Y.: New York State College of Agriculture, Cornell University.

BUTTERWORTH, JULIAN E. "Buildings and Grounds," *Rural School Survey of New York State*. Ithaca, N. Y.: Joint Committee on Rural Schools.

ECKLES, HARRY L., MOELLER, HUGH C., and SWAIN, CARL C. *Rural School Management*. New York City: Charles Scribner's Sons.

HOLTON, E. L., and STRICKLAND, V. L. "A Score Card for Rural Schools," *Bulletin, Vol. 2, No. 9*. Manhattan, Kan.: Kansas State Agricultural College.

LATHROP, EDITH A. "The Improvement of Rural Schools by Standardization," *Rural School Leaflet No. 32*. Washington, D. C.: Department of the Interior, Bureau of Education.

A large, stylized handwritten signature in black ink, which appears to read "J. H. Work". The signature is written in a cursive style with a large, looping initial "J" and a long, sweeping underline.

OPENING EXERCISES



By

MILO B. HILLEGAS, Ph.D., LL.D.

Professor of Education
Teachers College, Columbia University

OPENING EXERCISES

THE opening exercises that any teacher may undertake should be controlled by as definite purposes as any other period during the school day. Naturally the period coming the first thing in the morning has a pronounced influence on the remainder of the day. Five or ten minutes of disorder on the part of the children can get the class headed in a direction that the teacher cannot change. On the other hand a well-ordered, carefully planned period may set the standard for the rest of the school day.

The purposes that the teacher may have for the opening exercises will of necessity be varied. Often opening exercises are not optional with the teacher but are required either by city regulation or by the will of the principal. Even the program that is to be followed in these exercises may often be handed to the teacher. It is important, therefore, that each teacher should acquaint herself with such requirements as may exist for her particular school or classroom.

There are two or three outstanding features that every teacher should observe in the conducting of opening exercises. First of all, the teacher should recognize that the exercises are for the pupils. The minutes used for this purpose are a real part of the school day. Unless the children participate in the thoughts and exercises that take place, the period is likely to be detrimental rather than helpful. This implies that the teacher must give consideration to the general plan

of the opening exercises. It does not mean that there need be a display of enthusiasm on the part of the children. Often they will enjoy and be benefited by the attitude of reverence.

Preparation on the part of the teacher for opening exercises does not differ in any essential particular from preparation for any other school period. The teacher must know in advance what is to be accomplished and then she must so arrange matters as to achieve her purposes.

In many schools the opening exercises partake of a religious character. There is an opening song or a hymn, a brief reading from Scripture, usually the Psalms, and the repetition of the Lord's Prayer, followed by such announcements as may be pertinent for the day and by a closing song or hymn. In many schools the Psalm is read responsively. Manifestly, one purpose of such an exercise is to instil the spirit of reverence. It often happens, however, that the attitude of the pupils concerned is very remote from anything that resembles reverence. The school that uses a set form of this character will need to exercise care in the control of pupils if the important purpose is to be achieved.

In schools in which the religious type of service either is not required or is forbidden, teachers make use of the period to bring about a proper social attitude in the school or classroom. Whenever feasible, such exercises are begun with a song in which the entire group participates. Then follows some exercise that is likely to be in the nature of a surprise to most of the children. This may be something done by a small group of children within a classroom or by a particular grade if the entire school assembles.

When the exercises are held in a classroom, teachers often find it desirable to read selections that are of particular interest to the children. Some teachers follow the plan of limiting definitely the time that shall be used in reading and of continuing the reading of a selection on successive days. There are schools in which tardiness has been practically eliminated by this device. Needless to say, children will not be particularly enthusiastic over listening to selections that

appear in their regular school texts. It is important, therefore, that teachers give particular consideration to the selection of the material that they expect to employ. The pupils must be able to get the thought through listening. The vocabulary that is used must therefore be easily within their understanding and the thought itself must not be complicated. A selection that might be covered in one period is "Why the Bear Sleeps All Winter" (see Vol. III, p. 372). One that might be used for two or three successive periods is "The King of the Golden River" (see Vol. VI, p. 315). Many other excellent selections may be chosen from the departments of Literature in these volumes.

Dramatization may sometimes be used for opening exercises. This involves an activity that is greatly enjoyed by most children. The subjects that may be used are numerous, yet the teacher will need to exercise care in selecting those that are adapted to this purpose.

The regular work of the class furnishes some subjects that are suitable for dramatization. One fifth-grade class made effective use of the dramatic incidents connected with the opening of the Erie Canal. This was acted before the entire school, and every child in the class had a part. In a one-room school, three girls who composed the fifth grade dramatized the story of Heidi for an opening exercise. One girl wore boys' clothing, and this was the only stage adjustment required.

It will seldom be necessary or desirable to go outside of the regular work of the class or school to find suitable subjects for plays that are to be used for opening exercises. The teacher must be ready to guide in the selection of subjects, and also in the preparation that is made. Subjects that cannot be acted within the time set apart for the opening exercises should be avoided. The teacher should also avoid such subjects as are likely to require stage equipment that the classroom or assembly hall stage cannot easily supply. The stories in the primary and intermediate-grade History departments, Volumes V and VIII, respectively, and in the depart-

ments of Literature will supply many ideas for dramatization of these types.

Children should not be expected or encouraged to imitate adult acting. Many children in the early grades act with grace that adults must spend a long time in attaining. It is to preserve this grace as well as to give pleasure to the entire group that this type of opening exercise is employed. Discussions of dramatization by pupils will be found in Volume III, page 249, Volume VI, page 287, and Volume X, page 312.

It will often be possible to make use, in the program, of children who have had experiences that will be of interest to the rest of the class. A child who has visited in distant places or has seen things that are not commonly observed by the rest of the children may relate his experiences with telling effect. This will seldom be the case, however, unless the teacher helps him to organize his thoughts properly. A program for such a meeting might be organized as follows:

1. Opening song
2. Any announcements that are of importance to the class
3. The introduction of the speaker
4. The talk by a pupil

This procedure is sometimes varied by inviting adults to speak to the children on some subject that will be of interest to them. The teacher will need to be very explicit in her invitation to such persons, letting them know the time at which they are to appear, the order of the exercises, and the length of time that they will be permitted to speak.

Special-day exercises will often furnish the motive for at least part of the opening exercises. This suggestion relates particularly to the learning and singing of some selections that are to be used later in a special-day program.¹ One caution, however, needs to be urged. All of the singing in a school should not be confined for any considerable length of time to one particular occasion. All too often schools devote the month of November to Thanksgiving songs and then the following month to Christmas songs. Desirable as these selec-

¹For this type of program see Index under Special-Day Programs.

tions are, they certainly should not replace others that are of equal or greater interest and importance to the children themselves.

In the various states there are different days that for one reason or another are set apart for particular observance. Often such occasions can be utilized with telling effect in the opening exercises. Many school systems observe what has come to be known as School Week. Each day in the week a particular feature of public education is considered. Many schools utilize these suggestions for programs for opening exercises.

A common defect with opening exercises is that too small a proportion of the children participate. Certain ones possess more talent than others and consequently these fortunate ones are given the important parts in all exercises. These pupils are in less need of self-expression than those who constantly make up the audience.

In order that all of the pupils may benefit most by the opening exercises, the teacher will need to vary the character of the programs. For one thing, she must be careful not to assign pupils to parts for which they are not adapted. An overgrown, bashful boy forced to take a part suited to a small child is a pathetic individual. It is not desirable that each pupil shall take part in an active way in each opening exercise, but it is important that no pupil shall fail to receive all of the benefits that may possibly come from this school activity.

It is not possible to give any fixed program for opening exercises that will achieve desired results, except in the case of the exercise which is in the nature of a religious service. The element of novelty is most important. Many teachers have found it desirable to eliminate opening exercises except on one or two days during the week, and on these days to put forth unusual effort to make the opening exercises interesting and profitable. The sample programs given on the following page are suggestive of some of the types of exercises which have been found effective.

Opening song by class or school
Announcements
Talk by pupil on some recent experience
Song or dismissal

Opening song by class or school
Announcements
Talk by some adult on question of interest to pupils
Dismissal

Song or hymn by class or school
Reading of Psalm, responsively; Lord's Prayer in unison
Announcements
Song or hymn

Song by class or school
Announcements
Reading by teacher
Dismissal

Announcement of program by teacher or pupil
Exercise by group or class
Dismissal

The departments of Music in Volumes IV and VII, as well as the departments of Literature, will be found very helpful in planning these programs.

Milo B. Hillegas.

MORAL AND CIVIC EDUCATION



By

ERNEST HORN, Ph.D.

Professor of Education
Director of University Elementary School
University of Iowa

MORAL AND CIVIC EDUCATION

TO DEVELOP better conduct on the part of pupils and to build better citizens, it is desirable that the teacher have four qualifications: First, she should understand clearly the need for moral and civic education; second, she should know exactly what to teach; third, she should know how to teach the principal types of lessons in moral and civic education; and fourth, she should know how to measure the results of her teaching.

THE NEED FOR MORAL AND CIVIC EDUCATION¹

One cannot read the newspapers and magazines of today without being profoundly impressed by the amount and variety of lawlessness reported by them. Moreover, only the more spectacular instances of lawbreaking, such as murder, banditry, and bootlegging, are ordinarily given space in the papers. Many small but frequent offenses, such as petty thievery, slander, and trespass, are given little or no publicity. Lawbreaking is, therefore, even more common than newspapers would lead one to believe. Nor is lawbreaking limited to a so-called criminal class. Certain types of laws, such as traffic ordinances and regulations concerning tres-

¹See "Modern Crime: Its Prevention and Punishment," *The Annals of the American Academy of Political and Social Science*, Vol. CXXV. See also W. C. Bagley, *Determinism in Education*, chaps. iii, v, vii, and viii. Baltimore: Warwick & York, Inc.

pass, are broken by a very large proportion of the whole population. In this latter way, especially, many parents set before their children a disregard for the law and for the rights of others.

INCREASE IN JUVENILE CRIME. The steady increase in the number of juvenile criminals is one of the startling aspects of the present moral situation. In one prison in the United States the number of inmates between the ages of sixteen and twenty-one increased from 1,559 to 2,328 in two years' time. Approximately 50 per cent of the prisoners in one large state prison are less than twenty-five years of age, and 80 per cent are less than thirty years of age. It has been estimated that from 75 to 80 per cent of all crimes are committed by young men who are not more than twenty-two years old.

It must be kept in mind, moreover, that the amount of unethical conduct which can be classified under the law is but a small part of all of the bad conduct in a nation or in a community. An analysis of all types of misbehavior shows definitely that our combined educational institutions, including the school, the home, the church, the newspaper, the court, and the various influences of the community, have failed to develop a type of citizen who is as law-abiding as the citizen in the average European community. Clearly, all types of educational institutions must take serious stock of the possibilities of improving this condition.

THE MORAL STANDARDS OF SCHOOL CHILDREN. The preceding paragraphs have shown the exceedingly critical moral condition of the country as illustrated by actual conduct depicted in statistics of crime. Investigations of the moral standards of school children seem to reveal lower ideals than have been common in the past. In one of our larger cities an investigation seemed to show that the high-school boys and girls apparently believe that guilt resides not so much in misconduct as in being caught. A questionnaire containing ninety-six questions was given to ten thousand boys and girls in different localities. The answers to this questionnaire, if given in good faith, seem to show that such fundamental

qualities as honesty and sincerity are valued far less by these young people than such qualities as good manners, good looks, personality, intelligence, and good sportsmanship. In one study of elementary-school children an alarming number were found who could not be trusted to bring back all of the change received after making a purchase at a store. A very large proportion of all the misconduct which is classified as crime is to be found illustrated, at least in principle, in the conduct of young children. It is readily seen that the problem of moral education must be given serious consideration in the very first years of school experience.

EFFECT OF THE UNREST OF THE TIMES ON THE PROBLEM OF MORAL EDUCATION. The problem of moral and civic education is not peculiar to this age. It has been present in every period of history. It is especially prominent whenever economic and social conditions are changing rapidly. At such times traditional modes of behavior break down, and there is a lack of agreement as to what constitutes good conduct. At such times the young as well as the old are required to make adjustments for which they have neither adequate training nor experience. Having, therefore, no habitual behavior upon which to depend, individuals, both young and old, must choose among several possible ways of acting. The necessity for such a choice constitutes in itself a dangerous moral crisis. Since no period in history has seen such rapid social and economic changes as those of today, it is to be expected that our moral problem would be exceedingly critical.

The difficulties arising out of changed conditions have been increased because of the dominant place which "romantic individualism" plays as a philosophy of present-day life. This philosophy emphasizes self-expression rather than service, and freedom rather than responsibility. In its extreme form, it provides for the pursuit of immediate interests, often of a sensational sort, without regard either for others or for the individual's own future happiness. The teaching of one group of modern educational theorists fits into this philosophy all too easily.

RESPONSIBILITY OF THE SCHOOL IN MEETING THIS PROBLEM. There are many reasons why the public should turn to the school as the chief agency for the improvement of morals and citizenship. Development of good citizens is the chief business of the school. It is a fundamental principle in sociology that the controls exerted by law and the police power are of little avail unless backed up by intelligent public opinion. The controls of the court and the police are coercive, but coercive controls are effective only when coupled with educational controls. The development of educational controls is the business of the public at large, the press, the church, the home, and especially the school. This special responsibility of the school arises from four facts: First, the school has the child under control for a very large part of his waking day; second, the public is convinced of the fundamental integrity and morality of the body of teachers and superintendents as a whole; third, schools are strategically located—that is, wherever there are people, there are schools; fourth, the school is more directly under the control of the state or of the community than is any other educational agency. For these reasons it is natural that the public should demand that the schools take a large share of the responsibility for developing better citizens.

This does not imply that the past efforts of public education in this field have been failures. Rather it implies that our schools have met with so much success relatively as to warrant asking them to accept a greater burden. No one who has followed the record of the behavior of children during the last quarter of a century can doubt that the management of children is on a higher level today than at any time in the past. Twenty or thirty years ago it was not uncommon for a teacher to be “run out” by boisterous and lawless pupils. Order was enforced only by the rod. Today it is an almost unheard-of thing for a teacher to be “run out” of school. Children are in general well behaved in school and are so because of the training which they have received there.

And yet there is no doubt that moral and civic education

needs an emphasis which it has not received in the schools during the last generation. For a number of years there was a feeling that not much could be expected as a result of the direct teaching of morals and citizenship. It was urged that children receive moral education incidentally through the other activities of the school and through the personality of the teacher. Some contended that matters of morals are too subtle and too intangible to bear direct presentation. Accordingly, the schools that followed this point of view have given the impression of neglecting the teaching of morals and citizenship.

THE METHODS OF TEACHING MORAL EDUCATION

Formerly the school practice of this educational generation was to teach moral education by incidental methods. During recent years, however, there has been a growing recognition of the fact that indirect methods are not wholly satisfactory and that systematic direct instruction must be given. This does not mean that the efforts of indirect instruction are to be abandoned. On the other hand, they are to be strengthened and supplemented by direct instruction. It is worth while to understand clearly the best practices in indirect teaching as well as the best practices in direct teaching.

INDIRECT METHODS OF MORAL AND CIVIC TRAINING. It must be kept in mind that those who use indirect methods do not deny the importance of civic and moral training. They believe that the best training along these lines is given indirectly. They hold that the influences of literature, history, art, music, and the social organization of the school have real moral values. Even those who believe in direct moral teaching do not deny this. Therefore, in the following discussion the attempt is made to show how the best results can be secured from indirect methods, whether or not these results are accompanied by direct teaching.

Character Education Methods, The Iowa Plan, awarded the twenty-thousand-dollar prize by the Character Education

Institution in 1922, contains a wealth of suggestions as to how the various school studies and the organization of the school can be made to contribute to moral training.¹

Moral training through literature. The field of literature is especially rich in material of moral value. Biography has always been regarded as a means of inspiring high ideals and noble purposes in young people. There is a growing belief that proper examples of different types of literature have a good moral effect upon young readers and that bad examples have correspondingly undesirable effects. Modern investigations, especially those conducted under the direction of Dr. Starbuck at the Research Station in Character Education and Religious Education, are creating most valuable data regarding the literature which may be expected to build the best results.

The social sciences as an aid to moral training. Perhaps the greatest contribution made by school subjects to moral education is that made by the various social sciences, including community hygiene and sanitation. Indeed, for many years training in citizenship has been given as one of the main objectives of the teaching of social sciences. In many courses of study the instruction given is really of a type that would be called direct instruction in moral and civic education. If the best results are to be obtained from teaching the social studies, these studies must be organized in a way that will give constant practice in thinking, in questioning, in drawing inferences and conclusions from the study of facts, and in the openminded appraisal of the arguments on both sides of the question. (See Vol. XI, p. 63.)

In history lessons the material studied should be not only meticulously accurate but also vital in the sense of showing the relation of the events to the lives of the people of the time. There must be constant practice in considering what is right and fair. It must be kept in mind that only when the child has a clear understanding of any problem in history and

¹*Character Education Methods, The Iowa Plan.* Washington, D. C.: Character Education Institution.

only when he appreciates its value will the greatest indirect moral and civic training result.

Moral training through physical education. Perhaps in no other part of the child's education are the needs and opportunities for moral education so great as in sports. Temptations to misconduct are here on a primitive plane. Training in good sportsmanship is therefore not only necessary as a preventive measure but also exceedingly valuable in building up attitudes and practices which will carry over to other types of conduct.

Other subjects which have moral value. In a similar way other subjects, properly taught, undoubtedly have large moral value. The subject of industrial arts unquestionably does much to give one a vision of vocational service. Science can do much to make bias and dangerous superstition impossible. Music and art undoubtedly have refining influences. In fact, there is no subject which when properly taught does not make its contribution, not only because of the nature of its content but also because of the many classroom situations which inevitably arise in which the teacher can exemplify and stimulate the formulation of right attitudes.

There is doubtless a contribution to moral training in any classroom activity that meets certain requirements. To afford the maximum training, an activity should be meaningful and satisfying to the learner so that he may honestly and sincerely work to solve the problem or improve the skill involved. It must be closely related to the needs in life outside the school so that the child may acquire the abilities, qualities, and standards that are most essential in successful living. The child must be led to accept whole-heartedly the responsibility for accomplishment. The best results are impossible unless provision is made for sustained effort in the accomplishment of an end which is appreciated as worth while by the pupil.

Moral training through the socialized recitation. The school recitation has many possibilities for certain types of moral training. Many of these possibilities seem clearly to result in

properly conducted "socialized recitations." The most important feature of this method is that it is conducted in such a way as to duplicate the conditions under which people work together in life outside the school and so trains pupils in proper cooperation and in right attitudes toward one another. Moreover, when the subject for cooperative work has a close relationship to moral or civic questions, the interchange of opinions is of peculiar value. A pupil secures greater conviction regarding a moral question when working in a group than when working in isolation. Such a recitation affords the best opportunity for the development of that intelligent likemindedness which is essential for group action in any community.

But if the socialized recitation is to make such contributions it must be planned to meet several requirements: First, the class must work upon a problem which they appreciate as vital in life outside the school or in the organization of the school. Second, it should be a problem which can be solved better cooperatively than by individual effort. Third, much of the initiative for the formulation of the problem and for suggesting possible solutions must lie with the class and be accepted definitely by them as their responsibility. Fourth, there must be enough different sources of information or different jobs to be done so that individual pupils will be able to make special contributions to the solution of the problem. If every child has read exactly the same references or made exactly the same preparation there is no need for such cooperation as is found in a well-conducted socialized recitation.

It will readily be seen that learning in many subjects is not best gained by means of the socialized recitation. In spelling, in writing, in much of arithmetic, and in much of reading, learning is facilitated to a greater degree by individual instruction than by instruction of the type of the socialized recitation. An attempt to use the socialized recitation when there is no real need for cooperative effort results inevitably in mere formalism.¹

¹The best guide for a teacher in conducting the socialized recitation is *The Socialized Recitation*, by C. L. Robbins. Boston: Allyn and Bacon.

Moral training through pupil cooperation in the conduct of the school. Valuable moral training undoubtedly results when pupils are led to assume a large amount of responsibility for the conduct and success of the school. Under such circumstances each pupil meets the moral situations which arise with a new sense of the dignity of his own personality and of the importance of the educational program of which he is a part. To think deeply about his own conduct in school situations, to help to solve problems arising in the work and play with his classmates, and to stand before his classmates for what he believes to be right are concrete means of developing moral traits.

This does not mean that formal machinery of student self-government needs to be introduced. In fact, the best results seem to be secured without any such machinery which is likely to relieve rather than to stimulate the individual pupil to a feeling of greater responsibility. Certainly, if so-called student self-government is to be used, many cautions must be observed. In the first place, it should never be imposed upon a group of pupils without their readiness to accept it. It should be developed out of a need felt by them and should be founded upon a spirit of good will. It should never originate as a concession to pupils by authorities who have failed. In the second place, positive, significant jobs must be assumed by the pupils. Their duties should not be limited to mere janitor service such as keeping the building and grounds free from scraps of paper. Moreover, the work done by the pupils must be primarily constructive and not mere spy service for suspicious teachers. In the third place, any sort of organization which is set up, including student committees, must be trusted implicitly and given the most respectful consideration.

Especially in the elementary school the pupils may successfully take over various duties and responsibilities about the school without the building up of any machinery except the appointment of committees for the special task at hand. For example, elementary-school children of one school con-

ducted a courtesy campaign, taking entire responsibility for improving that specific aspect of conduct. The very remarkable effect on behavior in this school was undoubtedly due to the fact that every pupil felt personally concerned with the success of the campaign. In another elementary school, a class of pupils who had by their own efforts raised the money for and purchased a flagpole took charge of arranging the dedication ceremonies on Memorial Day.

Extra-curricular activities as an aid to moral training. Extra-curricular activities of various sorts are a source of valuable moral and civic training (see *Education in Social Relationships*, Vol. X, p. 211). Athletic associations, various clubs, musical organizations, and school assemblies¹ provide opportunities for allowing the children to share appropriately in the conduct of their school life. Not only is the quality of leadership thus developed but also a feeling of loyalty to the group in subordinate capacities. By including in the school those activities which are essential to the formation of habits of cooperation in worthy enterprises, the pupils learn more effectively how to cooperate in the solution of the problems in life outside the school.

The preceding brief discussion and the references given will perhaps suffice to show how moral training may be best secured as a part of the regular conduct of the school, aside from a special period in which moral and civic education is taught directly.

DIRECT INSTRUCTION IN MORAL EDUCATION. A survey which was made by the Character Education Committee of the Department of Superintendence of the National Education Association shows a great variety of courses of study in moral education as well as a great variety of methods.² The

¹The most helpful books on the school assembly are the *Francis W. Parker School Year Book*, Vol. II, published by the Francis W. Parker School, Chicago, and *Some Uses of School Assemblies*, published by the Lincoln School of Teachers College, Columbia University, New York City.

²*Department of Superintendence, Fourth Yearbook*, chap. xiv. Washington, D. C.: National Education Association.

present confusion proves clearly the need for constructive research which will help to show what should be taught in moral and civic education. Important beginnings in research have already been made. Those who are working at curriculum-making in moral and character education have accepted the principle that the curriculum in moral and civic education must be made by an analysis and an appraisal of the common and important moral and civic situations in life outside the school and by the appraisal and selection of the best types of conduct in each of these important situations.

Thus, two problems should be distinguished: First, What are the most common moral and civic situations in which our citizens are placed? Second, What characterizes the action of the best citizens in these situations?

In the attempt to answer these questions as well as to compare the conduct of children with the conduct of adults, three important types of investigations have been made. In the first type of investigation it is assumed that the main outline of the chief classes of moral situations can be obtained by an analysis of law and cases that come before the court. In the second it is assumed that useful data concerning moral situations and right conduct in any community can be obtained by asking supposedly competent judges to make judgments regarding common situations and how to meet them. In the third type of investigation it is assumed that it is of strategic importance to discover the situations in which children are put at various ages as well as to discover how children act in these situations.

It is easy to see how the analysis of laws and of cases that come before the various courts will produce important data for the purposes of moral education. In the first place, every serious type of maladjustment between individuals, between individuals and communities, and between communities tends to get written into a law and to come up as a case before some court. In the second place, it seems most likely that the human race has attempted by trial and error to work out the fairest solution to each of these maladjust-

ments and to write that solution into a rule or law. In the third place, for several hundred years a most critical study of how to improve these laws has been made by some of the finest minds in the world.

In the second type of investigation, namely, that in which supposedly competent persons are asked to give their judgments¹ regarding common moral situations and the best conduct in these situations, the procedure can be illustrated by describing one investigation. It must be kept in mind, however, that other investigations have used different methods. In this investigation two questions were answered by a hundred competent citizens who were trained to do the work. Each was first asked to think of the man or woman who would be the greatest loss to the community if removed from the community by death or any other cause. Each was asked to list concretely and specifically just what that individual does to make him so valuable as a neighbor and as a citizen. Second, each individual was asked to think of the person, man or woman, that the community would be best rid of, and to list the things which this undesirable individual has done to make him objectionable in the community. Each of the judges was warned that concrete and specific instances were desired, not mere statements of qualities such as dishonesty and intolerance.

By this method it has been possible to get a list of desirable and undesirable situations and modes of conduct in these situations. These situations have been organized into the main classes of moral situations and the main types of desirable and undesirable conduct listed for each of the main classes of situations. Further investigation is necessary to determine the relative importance of each of these classes of situations. Examples of moral situations and moral conduct which are discovered by the use of the method of judgments are given on pages 570 to 574.

¹Valuable illustrations of what groups of teachers may do are given by Dr. W. W. Charters in *The Elementary School Journal*, Vol. XXV, pp. 424-36 and pp. 507-17; and also in Franklin Bobbitt's *How To Make a Curriculum*. Boston: Houghton Mifflin Co.

Important beginnings have been made in analyzing the common moral situations in which children are put and in determining how children act in these situations. For example, in one investigation a number of trained workers spent several weeks at children's summer camps where they carefully observed and immediately recorded a list of unsocial or immoral acts of children. A discussion of each of these responses was carefully written and made the basis of study for the purpose of classifying them into a few main types such as falsely claiming honors, taking property from another, and speaking rudely. Mr. Albert Carmichael, the leader of the investigation, has tentatively classified the situations into those involving the following main headings: cheating, defrauding, lying, disturbing the peace of others, and forms of noncooperation.

Although such investigations as have just been described do not yet completely answer the question of what to teach in moral and civic education, they have afforded an abundance of stimulating suggestions. Examples of these suggestions will be found in the succeeding sections and also in the report of the National Committee on Character Education.¹

TYPES OF DIRECT INSTRUCTION IN MORAL AND CIVIC EDUCATION

Although it may be an undisputed fact that important indirect moral values result from the teaching of literature, history, and art, from the socialized recitation, and from student government, yet the present situation in this country seems to demand that in addition to these indirect influences, there must be direct moral and civic instruction. Those who say that morals are too subtle and too indefinite to be taught directly, or that pupils cannot understand such problems, either have not tried to teach children by direct methods or have not gone about the job frankly and with sympathy.

¹*Department of Superintendence, Fourth Yearbook*, chap. xiv. Washington, D. C.: National Education Association.

At present there are two principal methods of organizing courses in moral instruction: first, an organization about ideals, and second, an organization about typical life situations.

ORGANIZATION AROUND MORAL AND CIVIC IDEALS. Dr. W. W. Charters of The University of Chicago holds that ideals can and should be taught directly.¹ Although organizing his course of study around ideals, Dr. Charters gives for each ideal a large number of situations and "trait actions." For example, the chief classes of situations given under honesty are: money, property, statements, promises, social relations, rules, directions, orders, games, class recitations, examinations, tests, and preparation of lessons. The following detailed list of situations involving honesty in connection with statements illustrates how he uses situations to build ideals:

1. You make statements about yourself:
 - a. You need an excuse for an unjustified absence from school.
 - b. You have done something for which you know you will be punished if you confess when questioned.
 - c. You are questioned about your lateness in arriving at school or in getting home from school.
 - d. You are asked why you are not prepared in your studies.
 - e. You are questioned by your parents about misconduct in school.
 - f. You want to go to a ball game, and there is a chance that you might be excused from school if you plead sickness.
 - g. You are asked to report on the time spent in preparing a lesson.
 - h. You are required to report on your outside reading.
 - i. You forgot to clean your teeth, and the teacher asks, "How many cleaned their teeth this morning?"
 - j. You are asked if you studied your lesson, and you merely glanced into the book as you walked to school.
 - k. Many desirable activities at school are optional, and you can get your parents' consent to participate by telling them that they are compulsory.
 - l. You have to account for your failure to get assigned work done on time.

¹W. W. Charters, *The Elementary School Journal*, Vol. XXV, pp. 424-36 and pp. 507-17.

- m. You are asked to tell of a personal exploit.
- n. You are gone a long time on an errand, and the teacher asks, "Where have you been?"
- o. Your new suit is ruined, and your father asks you how you did it.
- p. You receive help at home, and the teacher asks you if you have done your own work.
- q. You are asked if you enjoy poetry, music, or art.
- 2. You make statements about other people:
 - a. You accuse another person of some misdeed.
 - b. You tell incidents about people who are absent.
 - c. You are asked about the misconduct of a classmate.
 - d. You are asked how you like another person's clothes, speech, or work.
 - e. You quote what another person has said.
 - f. You attempt to convey to other people the attitude of a certain person at a certain time.
 - g. You dislike an individual, and you have an opportunity to make statements reflecting on his character.
 - h. You are asked to give a statement concerning something on which you are not qualified to report.
- 3. Miscellaneous:
 - a. You are questioned about the disappearance of an article.
 - b. You tell a story about things you are supposed to have seen.
 - c. You tell what you have and do at home.
 - d. Someone asks you for directions to a certain place, and you like to play jokes on people.
 - e. You are asked the price of something you own, and you want it to seem very expensive.

ORGANIZATION AROUND LIFE SITUATIONS. An examination of the articles which Dr. Charters has published on this subject shows that the meat of his plan is the list of concrete situations. In the writer's judgment it is better to organize the course in moral and civic instruction around the chief classes of moral and civic situations. The conduct units involved in meeting these situations satisfactorily should be the beginning and the end of moral and civic instruction. In such instruction ideals play an important part, but they develop inductively out of a consideration of the concrete situations and therefore are incidental to the direct teaching of good conduct in these situations. Such a plan is not likely

to degenerate into mere talk or empty generalizations about abstract qualities of character. It keeps the minds of teachers, parents, and pupils upon conduct, which is the aim of all moral instruction. A critical study of an experimental trial of this method during two years indicates that schools may look with confidence to direct instruction organized about concrete situations as a means of a definite improvement of moral and civic conduct.

THE PROBLEM OF METHOD. An illustration of what is meant by concrete situations will serve to make clear the preceding paragraphs as well as to illustrate the most important principles which should be observed in teaching. In a certain city of about 40,000, the children in going to school cut across lots. Lawns were damaged, shrubbery broken down, and flower beds ruined. The first-grade teacher saw in this situation a need for moral instruction. She could have lectured to her pupils on trespassing and laid down rules, but having been trained to give a different type of moral instruction she did not do that. Rather, she went about the job frankly and directly. She took her pupils out to see some of these lots with the damaged lawns, shrubbery, and flower beds. She asked them if they saw anything there that they would not like if they owned the property. She asked the pupils how they thought the householders felt about the damage. The children saw very readily that the householders, of course, would not like to have their property harmed in any way.

She might have stopped at that point by saying, "Let's not do that any more." Instead, she asked, "How can we be sure that we stop cutting across these lots?"

The pupils discussed a plan for stopping this trespass, and they did stop it. They soon observed, however, that the pupils of the other grades were cutting across the lawns. They asked whether they ought not to try to get the rest of the pupils to stop damaging these properties. Again they formulated their plan of action. They went to the householders and apologized to them, explaining that they really had not meant to do any damage. They asked the owners' permission

to put up signs opposite the places where most of the damage had been done. The pupils made these signs themselves and put them up. Then they planned short speeches and chose representatives to go to the other grades in the school to make an appeal to them to stop cutting across lots. They also posted little girls and boys opposite these corners near the school to remind boys and girls that they should not cut across the lots.

Now, the teacher could have let the matter stop there. She had obtained results in terms of conduct. Instead, she led her pupils to apply what they had learned to other situations. She asked them if they could think of other instances where they had unthinkingly damaged the property of others. Two children suggested that they remembered sliding down a neighbor's haystack, others that they had been playing in an empty building without the permission of the owner, and so on, until the blackboard was full of a variety of records of trespass.

Then, working sympathetically, she led the children to state the general principles that they should keep in mind in all these situations. Each child who had been trespassing was led to plan how not to trespass in the future.

There are a number of very important factors in this teaching: First, it started with a concrete situation that could be readily understood by the children. Second, the pupils themselves were allowed to sense what was wrong in that situation. Third, the pupils were allowed to formulate for themselves a plan for right conduct. Fourth, they were allowed to carry it out, and they were left with the feeling that they had not done their job until it was carried out—that mere talking is not enough. Fifth, they were encouraged to plan for transferring what they had learned in this situation to other situations of a similar type and class. Sixth, they were guided in formulating in their own words and for themselves principles of conduct to govern them in the future. Finally, provision was made for checking up the number of times that each child responded correctly in similar situations.

You will notice that pupil initiative and proper self-expression were emphasized in all that this teacher did. Her teaching illustrates how one can combine all of the good that is claimed for freedom on the part of children with a definite sense of responsibility on their part. Here you have all of the benefits claimed by the disciplinarians coupled with the best that is claimed by those who emphasize freedom and self-expression.

Direct instruction of the type just described is now to be found in a great number of schools. The teachers of one of these schools were asked by the writer to be very critical in answering the following questions: First, *Is this subject less concrete and understandable than other subjects?* Without exception they say, "No, it is more concrete." The child can understand not only exactly what it is that he is supposed to be working out but also why he is supposed to be working it out. Second, *Is this subject more or less interesting than other subjects in the school?* They say that it is more interesting. Third, *Is it more or less important for the community and for the children than other studies in the school?* The answer is that it is more important. Fourth, *Has it as unmistakable an effect upon the conduct of pupils right now (as well as a promise of affecting the future) as have other studies?* The reply is, "More so."

In other words, in our preliminary experimentation of concrete, direct moral instruction we have uniform enthusiasm on the part of teachers and of parents who have participated in this type of work.

It must be kept in mind that direct instruction does not mean lectures on moral education by the teacher, as the preceding illustration shows in detail. Neither can instruction be limited to mere devices, helpful though these may be, or organized about the learning and repeating of moral codes. However, the teacher should be familiar with some of the most successful devices as well as with such codes as seem to be most useful. One of the most successful devices and two of the codes are given in the paragraphs which follow.

RECORDING GOOD DEEDS WITNESSED

A number of years ago the superintendent of schools in Lexington, Kentucky, inaugurated a plan of teaching moral education through having the pupils make what were called books of "Golden Deeds." In these books the pupils recorded and illustrated with pictures important good deeds which they had seen. The plan was apparently worked out with great success year after year. It was reported so enthusiastically by this superintendent and his teachers that others tried it, some without change and some with modifications.

The value of the plan lies in the principle that a child who is sensitive to the good in the world, who thinks about that good, and who talks it over with others, is likely to carry it over into his own conduct. Most teachers who have tried the plan are convinced that its influence upon the conduct of the children is most beneficial. It is but an illustration of the proverb, "As he thinketh in his heart, so is he." Moreover, if no other good resulted, the habit of talking about the good rather than the ill that people do would justify the procedure.

It is not so clear that the time spent in making and illustrating booklets adds much, if anything, of value. Many good principles of teaching are spoiled by being formalized. In this case it seems likely that the labor of preparing booklets might readily be so irksome as to cause pupils to lose interest in seeing good deeds. Certainly great care must be taken if ends and means are not to be confused.

A better plan would seem to be to make a simple record on the blackboard of the good deeds seen during the week by the pupils. Such a plan is easily administered. The teacher has only to set aside a space on the blackboard for these reports. Each pupil who has seen what seems to him to be an especially good deed writes a brief sentence about it.

A useful variation of this plan is to have one pupil responsible each week for reporting such good deeds. At some time during the week the good deeds which have been enumerated

on the board may be made the basis of oral discussion.

Care must of course be taken to avoid anything that smacks of priggishness or hypocrisy. The teacher should at all times stay in the background, leading the pupils to discuss these good deeds as simply and frankly as they would if she were not present.

A careful study of this plan, properly used, will convince any teacher of its great value in building on the part of the class as a whole a consensus as to what is good conduct. The importance of unified group sentiment and group ideas was pointed out on page 562. Whenever a class can be led to develop a group sentiment in favor of good sportsmanship, of telling the truth, or of any other desirable type of action, much of the problem of moral education has been solved.

Naturally these reports of good deeds may be expected to be greatly stimulated by the type of systematic instruction which is described on page 573. In fact, these good deed reports afford one of the best methods of guaranteeing that direct instruction in any type of conduct will be habituated by the various pupils in a grade.

In one grade-school building which had a Friday morning assembly for the entire school, one representative was chosen from among the pupils of each grade to give a minute report of the best deeds observed by anybody in his grade. These reports can be illustrated by the following stenographic records of statements by fifth-grade pupils:

Last night I was playing with some children. There was a big dog around there and they were all afraid of him. There was a little boy there that must have been about two and a half years old. He was standing on the front porch. The dog came and the children started running in the house. The little boy got knocked over. A little girl stopped and picked him up and carried him in the house.

A nice deed that I saw done the other day was, there was a lady walking along the street. She dropped a package. There was a little girl back of her and a little boy back of the little girl. The little girl passed her right up, but the little boy stopped and picked the package up for her.

TEACHING MORAL CODES

During the last few years a great deal of attention has been given to moral codes. Two of these codes follow. The first is the *Children's Code of Morals*, by William J. Hutchins.¹ This code won a prize of five thousand dollars in a National Morality Codes competition, for the best children's code of morals. The second code is the Collier's code.²

CHILDREN'S CODE OF MORALS

MORAL CODE FOR BOYS AND GIRLS

Boys and girls who are good Americans try to become strong and useful, that our country may become ever greater and better. Therefore they obey the laws of right living which the best Americans have always obeyed.

I. THE LAW OF HEALTH

The Good American Tries To Gain and To Keep Perfect Health

The welfare of our country depends upon those who try to be physically fit for their daily work. Therefore:

1. I will keep my clothes, my body, and my mind clean.
2. I will avoid those habits which would harm me, and will make and never break those habits which will help me.
3. I will try to take such food, sleep, and exercise as will keep me in perfect health.

II. THE LAW OF SELF-CONTROL

The Good American Controls Himself

Those who best control themselves can best serve their country.

1. I will control my *tongue*, and will not allow it to speak mean, vulgar, or profane words.

¹Copies of this code can be secured from the Character Education Institution, 3770 McKinley Street N.W., Chevy Chase, Washington, D. C.

²"Collier's Moral Code for School Children," Vol. LXXV, chap. v.

2. I will control my *temper*, and will not get angry when people or things displease me.
3. I will control my *thoughts*, and will not allow a foolish wish to spoil a wise purpose.

III. THE LAW OF SELF-RELIANCE

The Good American Is Self-Reliant

Self-conceit is silly, but self-reliance is necessary to boys and girls who would be strong and useful.

1. I will gladly listen to the advice of older and wiser people; I will reverence the wishes of those who love and care for me, and who know life and me better than I; but I will learn to think for myself, choose for myself, act for myself.
2. I will not be afraid of being laughed at. I will not be afraid of doing right when the crowd does wrong. Fear never made a good American.

IV. THE LAW OF RELIABILITY

The Good American Is Reliable

Our country grows great and good as her citizens are able more fully to trust each other. Therefore:

1. I will be honest, in word and in act. I will not lie, sneak, nor pretend, nor will I keep the truth from those who have a right to it.
2. I will not do wrong in the hope of not being found out. I cannot hide the truth from myself and cannot often hide it from others.
3. I will not take without permission what does not belong to me.
4. I will do promptly what I have promised to do. If I have made a foolish promise, I will at once confess my mistake, and I will try to make good any harm which my mistake may have caused. I will so speak and act that people will find it easier to trust each other.

V. THE LAW OF CLEAN PLAY

The Good American Plays Fair

Clean play increases and trains one's strength, and helps one to be more useful to one's country.

1. I will not cheat, nor will I play for keeps. If I should not play fair, the loser would lose the fun of the game, the winner would lose his self-respect, and the game itself would become a mean and often cruel business.
2. I will treat my opponent with courtesy.
3. If I play in a group game, I will play, not for my own glory, but for the success of my team and the fun of the game.
4. I will be a good loser or a generous winner.

VI. THE LAW OF DUTY

The Good American Does His Duty

The shirker or the willing idler lives upon the labor of others, burdens others with the work which he ought to do himself. He harms his fellow-citizens, and so harms his country.

I will try to find out what my duty is, *what I ought to do*, and my duty I will do, whether it is easy or hard. What I ought to do, I can do.

VII. THE LAW OF GOOD WORKMANSHIP

The Good American Tries To Do the Right Thing in the Right Way

The welfare of our country depends upon those who have learned to do in the right way the things that ought to be done. Therefore:

1. I will get the best possible education, and learn all that I can from those who have learned to do the right thing in the right way.
2. I will take an interest in my work, and will not be satisfied with slipshod and merely passable work. A wheel or a rail carelessly made may cause the death of hundreds.
3. I will try to do the right thing in the right way, even when no one else sees or praises me. But when I have done my best, I will not envy those who have done better, or have received larger reward. Envy spoils the work and the worker.

VIII. THE LAW OF TEAM-WORK

The Good American Works in Friendly Cooperation with His Fellow-Workers

One man alone could not build a city or a great railroad. One man alone would find it hard to build a house or a

bridge. That I may have bread, men have sowed and reaped, men have made plows and threshers, men have built mills and mined coal, men have made stoves and kept stores. As we learn better how to work together, the welfare of our country is advanced.

1. In whatever work I do with others, I will do my part and will help others do their part.
2. I will keep in order the things which I use in my work. When things are out of place they are often in the way, and sometimes they are hard to find. Disorder means confusion and the waste of time and patience.
3. In all my work with others, I will be cheerful. Cheerlessness depresses all the workers and injures all the work.
4. When I have received money for my work, I will be neither a miser nor a spendthrift. I will save or spend as one of the friendly workers of America.

IX. THE LAW OF KINDNESS

The Good American Is Kind

In America those who are of different races, colors, and conditions must live together. We are of many different sorts, but we are one great people. Every unkindness hurts the common life, every kindness helps the common life. Therefore:

1. I will be kind in all my *thoughts*. I will bear no spite or grudges. I will not think myself above any other girl or boy just because I am of a different race or color or condition. I will never despise anybody.
2. I will be kind in all my *speech*. I will not gossip nor will I speak unkindly of anyone. Words may wound or heal.
3. I will be kind in all my *acts*. I will not selfishly insist on having my own way. I will always be polite. Rude people are not good Americans. I will not trouble unnecessarily those who do work for me. I will do my best to prevent cruelty, and will give my best help to those who need it most.

X. THE LAW OF LOYALTY

The Good American Is Loyal

If our America is to become ever greater and better, her citizens must be loyal, devotedly faithful, in every relation of life.

1. I will be loyal to my family. In loyalty I will gladly obey my parents or those who are in their place. I will do my best to help each member of my family to strength and usefulness.
2. I will be loyal to my school. In loyalty I will obey and help other pupils to obey those rules which further the good of all.
3. I will be loyal to my town, my state, my country. In loyalty I will respect and help others to respect their laws and their courts of justice.
4. I will be loyal to humanity. In loyalty I will do my best to help the friendly relations of our country with every other country, and to give to everyone in every land the best possible chance.

If I try simply to be loyal to my family, I may be disloyal to my school. If I try simply to be loyal to my school, I may be disloyal to my town, my state, and my country. If I try simply to be loyal to my town, state, and country, I may be disloyal to humanity. I will try above all things else to be loyal to humanity; then I shall surely be loyal to my country, my state, and my town, to my school and to my family.

And he who obeys the law of loyalty obeys all of the other nine laws of The Good American.

The Collier's code reads as follows:

COLLIER'S MORAL CODE FOR SCHOOL CHILDREN

If I want to be a happy, useful citizen I must have:

COURAGE AND HOPE

I must be brave—This means I must be brave enough and strong enough to control what I think, and what I say and what I do, and I must always be hopeful because hope is power for improvement.

WISDOM

I must act wisely—In school, at home, playing, working, reading, or talking, I must learn how to choose the good and how to avoid the bad.

HEALTHFULNESS AND CLEANLINESS

I must make my body strong—My eyes, my teeth, my heart, my whole body must be healthful so that my mind can work properly. I must keep physically and morally clean.

HELPFULNESS AND UNSELFISHNESS

I must use my strength to help others who need help—If I am strong I can help others, I can be kind, I can forgive those who hurt me, and I can help and protect the weak, the suffering, the young and the old, and dumb animals.

INDUSTRY AND GOOD HABITS

I must make my character strong—My character is what I am, if not in the eyes of others, then in the eyes of my own conscience. Good thoughts in my mind will keep out bad thoughts. When I am busy doing good I shall have no time to do evil. I can build my character by training myself in good habits.

KNOWLEDGE AND USEFULNESS

I must make my mind strong—The better I know myself, my fellows, and the world about me, the happier and more useful I shall be. I must always welcome every useful knowledge in school, at home, everywhere.

CHARITY

I must love—I must love God, who created not only this earth but also all men of all races, nations, and creeds, who are my brothers. I must love my parents, my home, my neighbors, my country, and be loyal to all these.

HUMILITY AND REVERENCE

I must know that there are always more things to learn—What I may know is small compared to what can be known. I must respect all who have more wisdom than I, and have reverence for all that is good. And I must know how and whom to obey.

TRUTH AND HONESTY

I must be truthful and honest—I must know what is true in order to do what is right. I must tell the truth without fear. I must be honest in all my dealings and in all my thoughts. Unless I am honest I cannot have self-respect.

FAITH AND RESPONSIBILITY

I must do all these things because I am accountable to God and to humanity for how I live and how I can help my fellows, and for the extent to which my fellows may trust and depend upon me.

Students of moral-education problems do not agree as to the good to be secured from these codes. Their chief advantage is that they give a rather complete catalog of the moral qualities. Objections to the codes are: first, that they are likely to result in mere lip service; second, that they are not formulated by children and in their own language; and third, that the general way in which they are formulated makes it difficult for the child to apply them to specific situations.

Whether codes should or should not be used must be determined in great part by the way in which they are used. If they are to be merely memorized and repeated in a formal fashion, they will probably do more harm than good. If, on the other hand, there is a code which represents the formulation arrived at after adequate discussion of concrete situations, it is conceivable that to learn it would be worth while. However, it seems quite clear that a code which the children formulate in their own words after a discussion of concrete instances to which their generalizations apply will be much more effective. After having made such a formulation, it is a good thing to adopt and learn appropriate statements which are maxims or which have been written by great men and women. For example, after the children have formulated a statement to the effect that they should not gossip, they might readily learn the statement, "Speak well of your friends; of your enemies, say nothing."

SECURING THE COOPERATION OF PARENTS

There is no part of children's education in which the cooperation of parents is so necessary as it is in the improvement of moral conduct. Without this cooperation the school can do something, but the results will fall far short of what could be obtained if parents and teachers worked together.

Many teachers have found it helpful to write a friendly note to parents seeking their cooperation in the improvement of a specific type of conduct on the part of a child. Such notes or letters are taken much more seriously than are report cards. Moreover, they enable the teacher and the parents to cooperate in a helpful way in the specific improvement which the child needs. Any tendency to mere fault-finding should be avoided in such letters. Rather the letters should contain a positive program in which teachers and parents can cooperate in bringing about the desired conduct.

It is a maxim in character-building that most of the child's interpretations of moral situations as well as most of his habitual responses to them are determined by the interpretations and responses of parents and others whom he admires. Unquestionably, one of the causes for our present crime situation is the bad examples which are unthinkingly set before the young. The following instances are taken from a study of unsatisfactory behavior in the presence of children. Each of these instances illustrates a fundamental type of immorality. We have evidence to show that the child transfers good principles of conduct from one situation to another. It seems certain that he may be expected also to transfer principles of conduct from such situations as these to others which involve the same principles.

1. A parent sends the child to borrow coffee and either fails to return as much as borrowed or fails to return coffee of the same quality or even fails to return the coffee at all.

2. A parent borrows a ladder from a neighbor and keeps it so long that the owner has to come after it, or he returns it knowing that he has cracked one rung, but says nothing about the damage.

3. The parent finds a hammer and does not try to find the owner, although from the nature of the place where the article was found it is likely that the owner could be located easily.

4. A parent is out driving in an automobile. In passing an orchard where apples can be reached by leaning over the fence, the parent takes some apples without saying anything to the owner of the orchard.

5. A parent takes the child for a walk in the country. They walk through a farmer's pasture, leaving the gates open so that the farmer's cattle and horses get out of the pasture.

6. A parent picnics with his child and friends in a public park and leaves paper and other refuse on the ground.

7. A parent entertains his children and friends at a picnic in a farmer's pasture without asking his permission.

8. A parent brings home towels, soap, and stationery from hotels or from Pullman cars.

9. A parent tries to get children six and seven years old to ride free, and in the case of children thirteen or fourteen years of age tries to pay only half-fare for them. Often in the presence of the child his age is misrepresented to the conductor in order to secure the lower rate.

10. A child is encouraged by a parent not to give up his ticket on the train unless the conductor calls for it and to use the ticket for another ride.

11. A child reports to his parent that the storekeeper gave him too much change and suggests that he return the money. The parent replies, "No. That's his lookout."

12. A mother, with the knowledge of her children, returned a broken dish to the store, saying that it was broken when she got it, although both the mother and her children knew that it was broken the first time it was used in setting the table.

13. An owner of some chickens allowed them to damage a neighbor's garden without attempting to do anything about it, in spite of the fact that he was conscious of the damage which was being done, and the further fact that his children also knew that he was conscious of this damage.

14. One mother habitually gossips to the detriment of her friends and neighbors.

The writer has several times pointed out to parent-teacher associations the seriousness of setting such examples before children. In no cases have parents been offended. They seemed glad to have the matter brought to their attention. Of course they must be told tactfully. Moreover, it must be

made clear that the teacher's whole purpose in bringing the matter to the parents' attention is to help the pupils.

HOW TO MEASURE RESULTS

A large number of attempts have been made to test or rate the various traits that are involved in good conduct. Four types of rating or measurement are given and commented upon by Dickson in the *Fourth Yearbook of the Department of Superintendence*.¹ He classifies the various attempts at measurement and rating under the following general heads:

1. Objective measurement by means of tests
2. Rating of general traits or habits by the teacher or by a group of teachers
3. Rating of traits or habits by the pupil
4. A point system by which points may be added or subtracted, according to meritorious or undesirable behavior

The form of measurement which is most widely used at present is probably the rating of traits and habits by the teacher or by the pupil. A large number of schools have some plan of checking or rating desirable moral and civic habits and attitudes.

Even when scientific tests are developed to the point where they can be used in public schools, and even though the best form of teacher- and pupil-rating is used, it must still be kept in mind that the final measure of the results of moral and civic education will always be the direct observation of conduct itself.

The truth of this statement can be made more obvious by recalling again the lesson in which pupils were taught not to cut across lawns (see p. 570). The success with which this lesson was taught could not be satisfactorily measured with any general objective test or by any form of rating so well as by the direct observation of the degree to which the children actually did stop cutting across the lawns.

¹*Fourth Yearbook of the Department of Superintendence*, pp. 433 ff. Washington, D. C.: National Education Association.

Since actual behavior and not mere knowledge is the aim of moral education, written tests can never replace the observation of concrete action as the final measure of moral and civic education.

CONCLUSION

In concluding this discussion, it is well to point out that while the last word has not been said either on the course of study or on the methods of teaching in the field of moral education, the results that are being obtained by methods described in this chapter are most encouraging.

The next twenty-five or thirty years should see greater emphasis on research in this field than has ever been seen in any other field of education. We have devoted science to material progress; we must now devote science to the study of the betterment of the conduct of individuals because it is at that point that our failure is manifest.

In this field of direct instruction in moral education it must be recognized that without proper method and without proper sympathetic attitudes such as those described in the illustration of the work of one first-grade teacher, the best intentions on the part of teachers may come to nothing. We need to map out specifically all the situations to which pupils must be taught to respond properly. We need to give them a consensus as to what should be done in those situations, and, more than that, we need to develop on their part a strong emotional bias and favor of appropriate conduct. We need to develop conduct on the basis of taste. It has always been a maxim in teaching morals that until the individual does what is right as a matter of feeling and as a matter of taste, he cannot be safely left to act as he should act.

With all this talk about teaching the pupil to think for himself, it must be kept in mind that life is so complicated and the wisdom of the race so subtle that unless one is reinforced by proper sentiments and tastes and feelings it is always all too easy to think of a logical sounding excuse for doing what one knows perfectly well he ought not to do.

REFERENCES FOR THE TEACHER

BAGLEY, W. C. *Determinism in Education*, chaps. iii, v, vii, and viii. Baltimore: Warwick & York, Inc.

BOBBITT, FRANKLIN. *How To Make a Curriculum*. Boston: Houghton Mifflin Co.

CABOT, MRS. ELLA LYMAN. *Seven Ages of Childhood*. Boston: Houghton Mifflin Co.

Character Education Methods, The Iowa Plan. Washington, D. C.: Character Education Institution.

CHARTERS, W. W. "Teaching of Ideals," *The Elementary School Journal*, Vol. XXV, pp. 264-76, 358-69, 424-36, 507-17.

DEWEY, JOHN. *Human Nature and Conduct*. New York: Henry Holt and Co.

DEWEY, JOHN. *Moral Principles in Education*. Boston: Houghton Mifflin Co.

Fourth Yearbook of the Department of Superintendence, chap. xiv. Washington, D. C.: The Department of Superintendence of the National Education Association of the United States.

Francis W. Parker School Year Book, Vol. II. Chicago: Francis W. Parker School.

"Modern Crime: Its Prevention and Punishment," *The Annals of the American Academy of Political and Social Science*, Vol. CXXV.

NEUMANN, HENRY. *Education for Moral Growth*. New York: D. Appleton and Co.

NEUMANN, HENRY. "Moral Principles in Secondary Education," *Bulletin No. 51*, chap. iv. Washington, D. C.: Department of the Interior, Government Printing Office.

ROBBINS, C. L. *The Socialized Recitation*. Boston: Allyn and Bacon.

SHARP, F. C. *Education for Character*. Indianapolis: The Bobbs-Merrill Co.

SISSON, EDWARD O. *Educating for Freedom*. New York: The Macmillan Co.

Some Uses of School Assemblies. New York: The Lincoln School of Teachers College, Columbia University.

Ernest Horn





